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PL SHEET MRKU 439 909 0.pdf	9
00346 MANIFEST 0950642.pdf	10
HB/L: GCHAM26080662	14
TYP: Externes B/L	14
VER285901 HBL 116.pdf	14
HB/L: GCHAM26090083	16
TYP: Externes B/L	16
VER285848 HBL 115.pdf	16
HB/L: GCHAM26090122	18
TYP: Externes B/L	18
VER285875 HBL 19.pdf	18
HB/L: VER285655	20
TYP: MSDS	20
VER285655 MSD 72.pdf	20
VER285655 MSD 73.pdf	29
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VER285666 MSD 3.pdf	53
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VER285799 MSD 33.pdf	65
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TYP: B/L	92
SACO Shipping Line Ltd. B/L VER285655 VER28566	92
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'VER285795 MSDS 1.pdf'	94
TYP: B/L	103
SACO Shipping Line Ltd. B/L VER285795 VER28579	103

HB/L: VER285824	105
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TYP: B/L	111
SACO Shipping Line Ltd. B/L VER285824 VER28582	111
 HB/L: VER285839	 112
TYP: B/L	112
SACO Shipping Line Ltd. B/L VER285839 VER28583	112
 HB/L: VER285877	 113
TYP: B/L	113
SACO Shipping Line Ltd. B/L VER285877 VER28587	113

**MAERSK****NON-NEGOTIABLE WAYBILL**

SCAC MAEU

B/L No. 721625627

Shipper (As principal, where "care of", "c/o", or other variants used.)
SACO SHIPPING GMBH
AS AGENT OF SACO SHIPPING LINE
LIMITED WOLLKAEMMEREISTR. 1
D-21107 HAMBURG / GERMANY
TAX-ID. DE-118597456

Booking No.
721625627

Export references
609HAM1607DECH

Svc Contract
299542652

Consignee (Negotiable only if consigned "to order", "to order of" a named Person or "to order of bearer".
As principal, where "care of", "c/o", or other variants used.)

INTERTEAM, S.A. DE C.V. COLIMA 114,
INT 201 COLONIA ROMA, C.P. 06700
MEXICO CITY. TEL: +525555149897
TAX ID: INT961206ES7
CTC: MARCELA GODINEZ

This contract is subject to the terms, conditions and exceptions, including the law & jurisdiction clause and limitation of liability & declared value clauses, of the current Maersk Bill of Lading (available from the Carrier, its agents and at terms.maersk.com/carriage), which are applicable with logical amendments (mutatis mutandis). To the extent necessary to enable the Consignee to sue and to be sued under this contract, the Shipper on entering into this contract does so on his own behalf and as agent for and on behalf of the Consignee and warrants that he has the authority to do so. The shipper shall be entitled to change the Consignee at any time before delivery of the goods provided he gives the Carrier reasonable notice in writing. Delivery will be made to the Consignee or his authorised agent on production of reasonable proof of identity (and, in the case of an agent, reasonable proof of authority) without production of this waybill. The Carrier shall be under no liability whatsoever for misdelivery unless caused by the Carrier's negligence.

Onward inland routing (Not part of Carriage as defined in clause 1. For account and risk of Merchant)

Vessel
GSL MARIA

Voyage No.
635W

Place of Receipt. Applicable only when document used as Multimodal Waybill
Hamburg

Port of Loading
Bremerhaven

Port of Discharge
Veracruz *

Place of Delivery. Applicable only when document used as Multimodal Transport B/L. (see clause 1)

PARTICULARS FURNISHED BY SHIPPER

Kind of Packages; Description of goods; Marks and Numbers; Container No./Seal No.

1 Container Said to Contain 52 PACKAGE

MRKU 439909-0 40/DRY 9'6
2 PACKAGES GROSS WEIGHT: 140.000 KGS MEASUREMENT: 1.536 CBM
SAFETY EQUIPMENT
HS CODE: 90200090,
39269097, 84213925,
84213925, 90279000,
84718000, 90271010,
73269098, 48119000
90319000, 85065010,
90318080
S.P. 188
1 CARTON GROSS WEIGHT: 19.260 KGS MEASUREMENT: 0.150 CBM
MEDICAL EQUIPMENT
HS CODE: 85072080
S.P. 238
16 PALLETS GROSS WEIGHT: 723.436 KGS MEASUREMENT: 20.640 CBM

Weight
18587.986 KGS

Measurement
54.069 CBM

Above particulars as declared by Shipper, but without responsibility of or representation by Carrier.

Freight & Charges

Rate

Unit

Currency

Prepaid

Collect

Carrier's Receipt. Total number of containers or packages received by Carrier.

1 container

Place of Issue of Waybill
Hamburg

Shipped on Board Date (Local Time)
2026-09-06

Date Issue of Waybill
2026-09-06

Declared Value Charges (see clause 7.3 of the Maersk Bill of Lading) for Declared Value of US\$

Shipped, as far as ascertained by reasonable means of checking, in apparent good order and condition unless otherwise stated herein the total number or quantity of Containers or other packages or units indicated in the box opposite entitled "Carrier's Receipt"

Signed for the Carrier Maersk A/S

Maersk Deutschland A/S & Co.KG
As Agent(s)

This transport document has one or more numbered pages

BIKE HELMETS AND REAR
LIGHTS
AS PER CUSTOMS INVOICE:
1007628, 1007629,
1007631,
1007774, 1017437,
1017438,
1035695, 1062526,
1113058,
113060, 1113061, 1113062,
1113063, 1113064,
1113065,
1113066, 1113067,
1113068,
1113069, 1113070,
1113071,
1113072, 1113073,
1113074,
1113075, 1113076,
1113078,
1113079, 1130322,
1147735,
1180098, 1191542,
1194841,
1222244, 1222245,
1242307,
1249940, 1261853,
1261854,
1285560, 1285561,
1285562,
1285923, 1309796,
1344850,
1355870, 1355871,
1355872,
1355873, 1396637,
1261850,

Freight & Charges	Rate	Unit	Currency	Prepaid	Collect

1261852, 1355869, 1355874
HS CODES: 650610, 610910,
420292, 611020, 610990,
570339, 830140, 830170
1 CARTON GROSS WEIGHT: 16.290 KGS MEASUREMENT: 0.082 CBM
MEDICAL EQUIPMENT
HS CODE: 90192090
S.P. 238
2 PALLETS GROSS WEIGHT: 706.000 KGS MEASUREMENT: 1.632 CBM
MEDICAL EQUIPMENT
HS CODE: 90192090
S.P. 238
3 PACKAGES GROSS WEIGHT: 577.000 KGS MEASUREMENT: 4.752 CBM
S.L.A.C.
ARTICULOS DE SEGURIDAD -
UNDER SP188
H.S. CODES: 8530.8000,
8517.6920, 8471.5000,
4415.1010
22 PALLETS GROSS WEIGHT: 14627.000 KGS MEASUREMENT: 16.051 CBM
S.T.C.
SPRINGS
HS: 73202081
1 PALLET GROSS WEIGHT: 1080.000 KGS MEASUREMENT: 4.474 CBM
S.T.C.
LASER IMAGING SYSTEM CDI
HS CODE: 84423000
1 PALLET GROSS WEIGHT: 144.000 KGS MEASUREMENT: 0.675 CBM
S.T.C.
SPARE PARTS
HS CODE: 84313900
2 PACKAGES GROSS WEIGHT: 440.000 KGS MEASUREMENT: 3.837 CBM
LOADED ONTO
2 PALLETS LOADED INTO
1
SCREEN PRINTING FRAME

Freight & Charges	Rate	Unit	Currency	Prepaid	Collect

HS-NO 76101000

HSCODE: 76101000

1 PALLET GROSS WEIGHT: 115.000 KGS MEASUREMENT: 0.240 CBM

S.T.C.

AUTO PARTS

HS CODE: 73182900

MRKU4399090 40 DRY 9'6 52 PACKAGE 18587.986 KGS 54.069 CBM

Shipper Seal : B197038

The Merchant(s) warrant and represent that this shipment and/or Goods will comply at all times with European Union, United States and United Nations sanctions and/or export control laws (Sanctions Laws), and that this shipment and/or Goods do not involve, whether directly or indirectly, any entity or person identified, or owned or controlled by any such entity or person identified, on the U.S. Treasury Departments Office of Foreign Asset Control (OFAC) list of Specially Designated Nationals and Blocked Persons, or any other similar list maintained by the European Union, or as promulgated by the United Nations Security Council (Designated Person). If, in the Carriers reasonable opinion, this shipment and/or Goods are in violation of the Carriers policy on Russia

[<https://www.maersk.com/news/articles/2022/02/24/russia-ukraine-situation-update>], Sanctions Laws or involves any Designated Person, the shipment and/or Goods will be returned to the origin at Carriers sole and unfettered discretion, and the Merchant(s) shall indemnify and hold harmless the Carrier, its servants and agents, for any breach of this clause. The Merchant(s) agree that the Carrier may stop the shipment and/or Goods in transit or withhold release of the shipment and/or Goods pending any investigation into compliance with this clause by the Merchant(s).

SHIPPER'S LOAD, STOW, WEIGHT AND COUNT

FREIGHT PREPAID

SD/CY

Freight & Charges	Rate	Unit	Currency	Prepaid	Collect

**MAERSK****NON-NEGOTIABLE WAYBILL**

SCAC MAEU

B/L No. 721625627

Shipper (As principal, where "care of", "c/o", or other variants used.)
SACO SHIPPING GMBH
AS AGENT OF SACO SHIPPING LINE
LIMITED WOLLKAEMMERSTR. 1
D-21107 HAMBURG / GERMANY
TAX-ID. DE-118597456

Booking No.
721625627

Export references
609HAM1607DECH

Svc Contract
299542652

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As principal, where "care of", "c/o", or other variants used.)

INTERTEAM, S.A. DE C.V. COLIMA 114,
INT 201 COLONIA ROMA, C.P. 06700
MEXICO CITY. TEL: +525555149897
TAX ID: INT961206ES7
CTC: MARCELA GODINEZ

This contract is subject to the terms, conditions and exceptions, including the law & jurisdiction clause and limitation of liability & declared value clauses, of the current Maersk Bill of Lading (available from the Carrier, its agents and at terms.maersk.com/carriage), which are applicable with logical amendments (mutatis mutandis). To the extent necessary to enable the Consignee to sue and to be sued under this contract, the Shipper on entering into this contract does so on his own behalf and as agent for and on behalf of the Consignee and warrants that he has the authority to do so. The shipper shall be entitled to change the Consignee at any time before delivery of the goods provided he gives the Carrier reasonable notice in writing.
Delivery will be made to the Consignee or his authorised agent on production of reasonable proof of identity (and, in the case of an agent, reasonable proof of authority) without production of this waybill. The Carrier shall be under no liability whatsoever for misdelivery unless caused by the Carrier's negligence.

Onward inland routing (Not part of Carriage as defined in clause 1. For account and risk of Merchant)

Vessel
GSL MARIA

Voyage No.
635W

Place of Receipt. Applicable only when document used as Multimodal Waybill
Hamburg

Port of Loading
Bremerhaven

Port of Discharge
Veracruz *

Place of Delivery. Applicable only when document used as Multimodal Transport B/L. (see clause 1)

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90319000, 85065010,
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S.P. 188
1 CARTON GROSS WEIGHT: 19.260 KGS MEASUREMENT: 0.150 CBM
MEDICAL EQUIPMENT
HS CODE: 85072080
S.P. 238
16 PALLETS GROSS WEIGHT: 723.436 KGS MEASUREMENT: 20.640 CBM

Weight
18587.986 KGS

Measurement
54.069 CBM

COPY

Above particulars as declared by Shipper, but without responsibility of or representation by Carrier.

Freight & Charges

Rate

Unit

Currency

Prepaid

Collect

Carrier's Receipt. Total number of containers or
packages received by Carrier.

1 container

Place of Issue of Waybill
Hamburg

Shipped on Board Date (Local Time)
2026-09-06

Date Issue of Waybill
2026-09-06

Declared Value Charges (see clause 7.3 of the Maersk Bill of
Lading) for Declared Value of US\$

Shipped, as far as ascertained by reasonable means of checking, in apparent good order and condition unless otherwise stated herein the total number or quantity of Containers or other packages or units indicated in the box opposite entitled "Carrier's Receipt"

Signed for the Carrier Maersk A/S

This transport document has one or more numbered pages

Maersk Deutschland A/S & Co.KG
As Agent(s)

BIKE HELMETS AND REAR
LIGHTS
AS PER CUSTOMS INVOICE:
1007628, 1007629,
1007631,
1007774, 1017437,
1017438,
1035695, 1062526,
1113058,
113060, 1113061, 1113062,
1113063, 1113064,
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1113075, 1113076,
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1180098, 1191542,
1194841,
1222244, 1222245,
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1249940, 1261853,
1261854,
1285560, 1285561,
1285562,
1285923, 1309796,
1344850,
1355870, 1355871,
1355872,
1355873, 1396637,

Freight & Charges

Rate

Unit

Currency

Prepaid

Collect

1261850,
1261852, 1355869, 1355874
HS CODES: 650610, 610910,
420292, 611020, 610990,
570339, 830140, 830170
1 CARTON GROSS WEIGHT: 16.290 KGS MEASUREMENT: 0.082 CBM
MEDICAL EQUIPMENT
HS CODE: 90192090
S.P. 238
2 PALLETS GROSS WEIGHT: 706.000 KGS MEASUREMENT: 1.632 CBM
MEDICAL EQUIPMENT
HS CODE: 90192090
S.P. 238
3 PACKAGES GROSS WEIGHT: 577.000 KGS MEASUREMENT: 4.752 CBM
S.L.A.C.
ARTICULOS DE SEGURIDAD -
UNDER SP188
H.S. CODES: 8530.8000,
8517.6920, 8471.5000,
4415.1010
22 PALLETS GROSS WEIGHT: 14627.000 KGS MEASUREMENT: 16.051 CBM
S.T.C.
SPRINGS
HS: 73202081
1 PALLET GROSS WEIGHT: 1080.000 KGS MEASUREMENT: 4.474 CBM
S.T.C.
LASER IMAGING SYSTEM CDI
HS CODE: 84423000
1 PALLET GROSS WEIGHT: 144.000 KGS MEASUREMENT: 0.675 CBM
S.T.C.
SPARE PARTS
HS CODE: 84313900
2 PACKAGES GROSS WEIGHT: 440.000 KGS MEASUREMENT: 3.837 CBM
LOADED ONTO
2 PALLETS LOADED INTO

Freight & Charges

Rate

Unit

Currency

Prepaid

Collect

Manifest

Page: 1

Container-No.: MRKU4399090 40' HIGH CUBE CONTAINER Seal-No.: B197038

Vessel: SAC1971 / GSL MARIA

ETS:

Master-B/L.: 721625627

BL-Ref	Marks & Nos	Qty	Packing	Description of goods	Kos	Cbm
GCHAM260	VER285901 ROCHLING AUTOMOTIVE MEXICO BLVD MINA DE CALDERONES 200 1 PUERTO INTERIOR 36275 SILAO MEXIKO	1	PALLET	S.T.C. AUTO PARTS HS CODE: 73182900	115.000	0.240
GCHAM260	VER285848 LITOGIMANN S.A. MEXICO	1	PALLET	S.T.C. LASER IMAGING SYSTEM CDI HS CODE: 84423000	1080.000	4.474
GCHAM260	VER285875 CEMENTOS FORTALEZA SA DE CV CASCO DEL RANCHO BATEJE 2 KM AL ESTE DEL KM 5 DE LA CARR. ATITALAQUIA APAXCO, EL REFUGIO ATOTONILCO DE TULA 42980 HIDALGO C.P. MEXICO	1	PALLET	S.T.C. SPARE PARTS HS CODE: 84313900	144.000	0.675
VER285655	3001519130	2	PALLETS	MEDICAL EQUIPMENT HS CODE: 90192090 S.P. 238	706.000	1.632
VER285655	3001516021	1	CARTON	MEDICAL EQUIPMENT HS CODE: 90192090 S.P. 238	16.290	0.082

Manifest

Page: 2

Container-No.: MRKU4399090 40' HIGH CUBE CONTAINER Seal-No.: B197038

Vessel: SAC1971 / GSL MARIA

ETS:

Master-B/L.: 721625627

BL-Ref	Marks & Nos	Qty	Packing	Description of goods	Kos	Cbm
VER285655	3001510848	2	PACKAGES	SAFETY EQUIPMENT HS CODE: 90200090, 39269097, 84213925, 84213925, 90279000, 84718000, 90271010, 73269098, 48119000 90319000, 85065010, 90318080 S.P. 188	140.000	1.536
VER285655	3001511363	1	CARTON	MEDICAL EQUIPMENT HS CODE: 85072080 S.P. 238	19.260	0.150

Manifest

Page: 3

Container-No.: MRKU4399090 40' HIGH CUBE CONTAINER Seal-No.: B197038

Vessel: SAC1971 / GSL MARIA

ETS:

Master-B/L.: 721625627

BL-Ref	Marks & Nos	Qty	Packing	Description of goods	Kos	Cbm
VER285795	ABUS AUGUST BREMICKER SOHNE KG BICYCLE VISION STORE SA DE CV	16	PALLETS	BIKE HELMETS AND REAR LIGHTS AS PER CUSTOMS INVOICE: 1007628, 1007629, 1007631, 1007774, 1017437, 1017438, 1035695, 1062526, 1113058, 113060, 1113061, 1113062, 1113063, 1113064, 1113065, 1113066, 1113067, 1113068, 1113069, 1113070, 1113071, 1113072, 1113073, 1113074, 1113075, 1113076, 1113078, 1113079, 1130322, 1147735, 1180098, 1191542, 1194841, 1222244, 1222245, 1242307, 1249940, 1261853, 1261854, 1285560, 1285561, 1285562, 1285923, 1309796, 1344850, 1355870, 1355871, 1355872, 1355873, 1396637, 1261850, 1261852, 1355869, 1355874 HS CODES: 650610, 610910, 420292, 611020, 610990, 570339, 830140,	723.436	20.640

Manifest

Page: 4

Container-No.: MRKU4399090 40' HIGH CUBE CONTAINER Seal-No.: B197038

Vessel: SAC1971 / GSL MARIA

ETS:

Master-B/L.: 721625627

BL-Ref	Marks & Nos	Qty	Packing	Description of goods	Kos	Cbm
				830170		
VER285824	AUTOMATIZCION TRAFICO ALTO S.A. DE C.V., ADDRESS, NO. 1-3	3	PACKAGES	S.L.A.C. ARTICULOS DE SEGURIDAD - UNDER SP188 H.S. CODES: 8530.8000, 8517.6920, 8471.5000, 4415.1010	577.000	4.752
VER285835	BRAND PRECISION MEXICO	22	PALLETS	S.T.C. SPRINGS HS: 73202081	14627.00	16.051
VER285877	CCL DESIGN MEXICO	2	PACKAGES	LOADED ONTO 2 PALLETS LOADED INTO 1 LCL SCREEN PRINTING FRAME HS-NO 76101000 **HSCODE: 76101000**	440.000	3.837

Total**Quantity
52****Grossweight Measurement
18.587.986 54.069**

Shipper Münch Präzisionsdrehteile GmbH & Co. KG Lange Str. 46 78586 Deilingen Germany		B/L No. GCHAM26080662	
Consigned to order of Röchling Automotive Mexico Blvd. Mina de Calderones 200 1 Puerto Interior 36275 Silao, MEX Mexico		 115, OMONIA AVENUE PAROUTIS BLDG., 3 rd Floor 3045 LIMASSOL	
Notify Party and address Röchling Automotive Mexico Blvd. Mina de Calderones 200 1 Puerto Interior 36275 Silao, MEX Mexico			
Ocean Vessel	Voyage No.	Port of Loading	Place of Acceptance
GSL MARIA	SAC1971	Bremerhaven	Hamburg
Port of Discharge	Place of Delivery	Freight payable	Number of original Bills of Lading
Veracruz	Veracruz	Veracruz	E / Express B/L
Marks and Nos.		Quantity and description of goods	Gross weight, kg Measurement, m ³
Röchling Automotive Mexico blvd Mina de Calderones 200 1 Puerto Interior 36275 SILAO MEXIKO		1 Pallet(s) S.T.C. auto parts HS Code: 73182900	115kg

DRAFT

All particulars above declared by Merchant	
For delivery of cargo please apply to Interteam SA de CV Colima 114 Desp 201 Col. Roma 06700 Cuauhtemoc, MEX Mexico	RECEIVED for shipment the above mentioned goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above. The Carrier in accordance with the provisions contained on this side and on the reverse side of this document: a) undertakes to perform or to procure the performance of the entire transport from the place at which the goods are taken in charge to the place designated for delivery in this document, and b) assumes liability as prescribed in this document for such transport. One of the Bills of Lading must be surrendered duly endorsed in exchange for the goods or delivery order. IN WITNESS whereof three (3) original Bs/L have been signed , if not otherwise stated above, one of which being accomplished the other(s) to be void.
Place and date of issue Norderstedt / 2026-SEP-04	
Declared value of the goods (see clause 12) US\$ _____ Ad valorem freight paid: _____ NOTE: The merchant's attention is called to the fact that according to clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay.	Signed for the carrier  as agents of carrier G.C.S. Container Line Ltd.

1. **Applicability**

Notwithstanding the heading "Combined Transport", the provisions set out and referred to in this Bill of Lading shall also apply, if the transport as described in this Bill of Lading is performed by one mode of transport only.

2. **Definitions**

"Carrier" means the party on whose behalf this Bill of Lading has been signed. "Merchant" includes the Shipper, the Receiver, the Consignor, and the Consignee, the holder of this Bill of Lading and the owner of the Goods or person entitled to the possession of the Goods and the servants and agents and principals of any of these, all of whom shall be jointly and severally liable to the Carrier for the payment of Freight, and for the performance of the obligations of any of them under this Bill of Lading. "Goods" means the cargo received from the Shipper and includes a Container not supplied by the Carrier. "Container" includes a container, trailer, transportable tank, flat rack, pallet or any other article used to consolidate Goods or any equipment thereof or connected thereto. "Carriage" means the whole of the operations and the services undertaken by the Carrier in respect of the Goods. "Combined Transport" arises when the Place of Acceptance and/or the Place of Delivery are set out on page two overleaf in the relevant margins.

3. **Carrier's Tariff**

The terms of the Carrier's applicable Tariff at the date of shipment are incorporated herein. Copies of the relevant provisions of the applicable Tariff are available from the Carrier or its agents. In the case of inconsistency between this Bill of Lading and the applicable Tariff, this Bill of Lading shall prevail.

4. **Time Bar**

All liability, whatsoever, of the Carrier shall cease unless suit is brought within 9 months after delivery of the Goods or the date when the Goods should have been delivered.

5. **Law and Jurisdiction**

Except as otherwise provided specifically herein, disputes arising under this Bill of Lading or in connection therewith shall be determined exclusively by the High Court of Justice in London and in accordance with the English law. Any actions against the Merchant may, at the Carrier's sole option, also be brought in the countries of the Port of Loading, Port of Discharge, Place of Delivery or in any jurisdiction where the Merchant has a place of business.

6. **Subcontracting**

The Carrier shall be entitled to subcontract the whole or any part of the contract of Carriage, loading, unloading, storing, warehousing, handling including, but not limited to all duties usually undertaken by a Carrier.

7. **Methods and Routes of Transportation**

The Carrier may at any time and without notice to the Merchant:

- (a) use any means of transport (water, land and/or air) or storage whatsoever;
- (b) transship or carry the Goods on another vessel or by conveyance or by any other means of transport than that named on page two overleaf;
- (c) proceed by any route in its sole and absolute discretion and whether the nearest, most direct, customary or advertised route at any speed, and proceed to or stay at any place whatsoever once or more often and in any order or omit calling at any port, whether scheduled or not;
- (d) terminate the transportation and discharge Goods or Containers or other packages and devan and/or store contents at any place whatsoever, ashore or afloat, in the open or covered, and require the Merchant to take delivery and, upon failure to do so, warehouse the Goods at risk and expense of Merchant and Goods;
- (e) comply with any orders, directions or recommendations given by any government or authority or by any person or body acting or purporting to act with the authority of any government or authority or having under the terms of the insurance on the Vessel or other conveyance employed by the Carrier the right to give such orders, directions or recommendations;
- (f) take any other steps or precautions as may appear reasonable to the Carrier under the circumstances.

The liberties set out in Clause 7(a) through 7(f) may be invoked for any purpose whatsoever even if not connected with the carriage covered by this Bill of Lading, and any action taken or omitted to be taken, and any delay arising therefrom, shall be deemed to be within the contractual and contemplated carriage and not be an unreasonable deviation. Notwithstanding, the Carrier shall be entitled to full Charges and any additional freight, storage and all other expenses incurred by or on behalf of Carrier, all of which shall be due and owing from Merchant, and the Carrier shall have a lien on the Goods for same.

8. **Optional Storage**

- (1) Goods may be stowed by the Carrier by means of and in, for example, Containers, trailers, transportable tanks, flats, pallets, or similar articles of transport used to consolidate Goods.
- (2) Containers, trailers, transportable tanks and covered and uncovered flats, whether stowed by the Carrier or received by it in a stowage condition from the Merchant, may be carried on or under deck without notice to the Merchant and if so carried, the legislation referred to in Clause 11 below shall apply notwithstanding carriage on deck and the Goods and/or Containers shall contribute to General Average as if carried under deck.

Notwithstanding anything contained in this Clause the Carrier shall be under no liability whatsoever for loss, damage or delay howsoever occurring to Goods stated on page two overleaf hereof to be carried on deck or so carried or to live animals whether or not carried on or under deck.

9. **Hindrances affecting performance**

- (1) The Carrier shall use reasonable endeavours to complete the transport and to deliver the Goods at the place designated for delivery or as near thereto as under the prevailing circumstances possible.
- (2) If at any time the performance of the contract as evidenced by this Bill of Lading is or will be affected by any hindrance, risk, delay, difficulty or disadvantage of whatsoever kind the Carrier (whether or not the transport is commenced) may at any time at its sole discretion and without notice to the Merchant:
- (a) abandon the Carriage of the Goods and where reasonably possible place the Goods or any part of them at the Merchant's disposal at any place which the Carrier may deem safe and convenient, whereupon the responsibility of the Carrier in respect of such Goods shall cease, or sell the Goods;
- (b) without prejudice to the Carrier's right to abandon the Carriage under Sub-Clause (a) above, continue the Carriage.
- (3) In any event the Carrier shall be entitled to full freight for Goods received for transportation and additional compensation for extra costs resulting from the circumstances referred to above. The Carrier exercising the liberties under this Clause shall not be under any obligation to take any particular measure and shall not be liable for any loss, delay or damage howsoever arising from any action or lack of action under this Clause.
- (4) The liability of the Carrier in respect of the Goods shall cease on the delivery or other disposition of the Goods in accordance with the orders or recommendations given by any government or authority or any person acting or purporting to act as or on behalf of such government or authority.

10. **Option of Inspection**

The Carrier may at its option open any Container or package to inspect the contents. If it appears that any part thereof cannot safely or properly be carried, either at all or without incurring additional expense, the Carrier may abandon the transportation and/or take any measures and/or incur any reasonable additional expenses to continue carriage or store Goods, which storage shall be deemed to constitute due delivery hereunder. The Merchant shall indemnify the Carrier against any reasonable additional Charges so incurred, unless due solely to the Carrier's fault.

11. **Basic Liability**

(1) The Carrier shall be liable for loss of or damage to the Goods occurring between the time when it receives the Goods into its charge and the time of delivery. In case of a multimodal transport and if the place of damage or loss of the Goods is known, the responsibility of the Carrier is determined by

such loss or damage arose or resulted from

- (a) act or neglect of the Merchant.
- (b) compliance with the instructions of the person(s) entitled to give them.
- (c) the lack of, or defective conditions of packing in the case of Goods which, by their nature, are liable to wastage or to be damaged when not packed or when not properly packed.
- (d) handling, loading, stowage or unloading of the Goods by or on behalf of the Merchant.
- (e) inherent vice of the Goods.
- (f) insufficiency or inadequacy of marks or numbers on the Goods, covering, or unit loads.
- (g) strikes or lock-outs or stoppages or restraints of labour from whatever cause whether partial or general.
- (h) nuclear incident.
- (i) act, neglect or default of the master, mariner, pilot or the servants of the Carrier in the navigation or in the management of the vessel.
- (j) fire, unless caused by the actual fault or privity of the Carrier.
- (k) act and instructions of governments, of prince and rulers, act of god, force majeure or authorities (including customs authorities) performing their duties.
- (l) independent subcontractors not appointed by or in the direct services of the Carrier.
- (m) any cause or event which the Carrier could not avoid and the consequence whereof it could not prevent by the exercise of reasonable diligence.
- (3) Where under Clause 11 (2) the Carrier is not under any liability in respect of some of the factors causing the loss or damage, it shall only be liable to the extent that those factors for which it is liable under this Clause have contributed to the loss or damage.
- (4) It shall be presumed that a damage which under the circumstances of the case could be attributed to the causes or events specified in Clause 11 (2) were caused by these causes or events. The Merchant shall however be entitled to prove that the loss or damage was not in fact caused either wholly or partly by one or more of these causes or events.

12. **Limits of Liability**

- (1) When the Carrier is liable for compensation in respect of loss of or damage to the Goods, such compensation shall be calculated by reference to the value of such Goods they would have had at the place and time they were delivered to the Merchant in accordance with the contract or when they should have been so delivered.
- (2) The sound value of the Goods shall be fixed according to the commodity exchange price or, if there is no such price, according to the current market price or, if there be no commodity exchange price or current market price, by reference to the normal value of Goods of the same kind and quality and is presumed to be the FOB/CFR invoice value plus freight and insurance if paid.
- (3) Compensation per Bill of Lading for Goods lost or damaged or for other damages shall not exceed US\$ 1,000.00 legal tender of the USA.
- (4) Compensation shall not, however, exceed the limits of the Hague Rules, Hague-Visby Rules/ US COGSA 1936/ or any other limit set under the applicable Conventions. In all other events the compensation shall not exceed US\$ 2.00 per kilo of gross weight of the Goods.
- (5) Higher compensation may be claimed only when, with the consent of the Carrier, the value for the Goods declared by the Shipper and which exceeds the limits laid down in this Clause has been stated on page two overleaf of this Bill of Lading at the place indicated and when an ad valorem freight has been paid. In that case the amount of the declared value shall be substituted for that limit.

13. **Special Provisions for Liability and Compensation**

- (1) Notwithstanding anything provided for in Clauses 11 and 12 above, the loss or damage of the Carrier and or the Merchant shall, in respect of liability of the Carrier, be determined by the provisions contained in any International Convention or national law which provisions cannot be departed from by private contract, to the detriment of the claimants and which would have applied if the Merchant had made a separate and direct contract with the Carrier in respect of the particular stage of transport where the loss or damage occurred and if there was received as evidence thereof any particular document which must be issued if such International Convention or national law shall apply.
- (2) If neither the Hague- or Hague-Visby Rules or US COGSA 1936 or The Water Carriage Act of 1936 apply to carriage by sea by virtue of the foregoing provisions, the liability of the Carrier in respect of any carriage by sea shall be determined by the International Convention for the Unification of certain rules relating to Bills of Lading dated 25 August 1924 (Hague Rules) and any subsequent amendments thereto. The Hague-/Hague-Visby Rules shall also determine the liability of the Carrier in respect of carriage by inland waterways as if such carriage were carriage by sea. They shall also apply to all Goods whether carried on deck or under deck.
- (3) If it cannot be proven where or when or at what stage of the Carriage the Goods were lost or damaged, it shall be conclusively deemed to have occurred whilst at sea and the Carrier's liability, if any, shall be determined in accordance with the provisions of Clause 13 (2).
- (4) If the place of receipt or place of delivery is not named on page two overleaf
- (a) the Carrier shall be under no liability whatsoever for loss of or damage to the Goods, howsoever occurring, if such loss or damage arises prior to loading onto the vessel;
- (b) if the place of delivery is not named on the face hereof, the Carrier shall be under no liability whatsoever for loss of or damage to the Goods, howsoever occurring, if such loss or damage arises subsequent to discharge from the vessel.
- (5) Clauses 11 to 13 of this Bill of Lading apply in addition to and shall not be construed as derogating from any defence or exclusion, restriction or limitation of liability available to the Carrier under the terms of this Bill of Lading or otherwise.

14. **Delay, Consequential Loss**

Unless expressly agreed, the Carrier does not undertake that the Goods shall arrive at the Port of Discharge or Place of Delivery at any particular time or to meet any particular market or use, and the Carrier shall not be liable for direct, indirect or consequential loss or damage caused by delay. If the Carrier should nevertheless be held legally liable for any such direct or indirect or consequential loss or damage caused by such alleged delay, such liability shall be limited to the freight for the transport covered by this Bill of Lading, or to the value of the Goods as determined in Clause 12, whichever is the lesser.

15. **Notice of Loss of or Damage to the Goods**

- (1) Unless notice of loss of or damage to the Goods, specifying the general nature of such loss or damage, is given in writing by the Merchant to the Carrier when the Goods are handed over to the Merchant, such handing over is prima facie evidence of the delivery by the Carrier of the Goods as described in this Bill of Lading.
- (2) Where the loss or damage is not apparent, the same prima facie effect shall apply if notice in writing is not given within three (3) consecutive days after the day when the Goods were handed over to the Merchant.

16. **Defences and Limits for the Carrier, Servants, etc.**

- (1) The defences and limits of liability provided for in this Bill of Lading shall apply in any action against the Carrier for loss or damage to the Goods whether the action be founded in contract, bailment or in tort and even if the loss or damage arose as a result of unseaworthiness, negligence or fundamental breach of contract.
- (2) The Merchant undertakes that no claim shall be made against any servant, agent, Subcontractor or other persons whose services the Carrier has used in order to perform this Contract and if a claim is nevertheless made, to indemnify the Carrier against all consequences thereof.
- (3) Without prejudice to the foregoing every such servant, agent, and Subcontractor shall have the benefit of all Terms and Conditions of

its own behalf, and also as agent and trustee for such servants, agents and Subcontractors.

17. **Merchant's Responsibility**

The Merchant shall be deemed to have guaranteed to the Carrier the accuracy, at the time the Goods were taken in charge by the Carrier, of the description of the Goods, marks, numbers, quantity and weight, as furnished by it and the Merchant shall defend, indemnify and hold harmless the Carrier against all loss, damage and expenses arising or resulting from inaccuracies in or inadequacy of such particulars. The Merchant shall remain liable even if the Bill of Lading has been transferred.

18. **Shipper-packed Containers**

- (1) If a Container has not been loaded, packed or stowed by the Carrier, the latter shall not be liable for loss of or damage to its contents and the Merchant shall cover any loss or expense incurred by the Carrier, if such loss, damage or expense has been caused by:
- (a) negligent loading, packing or stowing of the Container;
- (b) the contents being unsuitable for carriage in Container; or
- (c) the unsuitability or defective condition of the Container unless the Container has been supplied by the Carrier and the unsuitability or defective condition would not have been apparent upon reasonable inspection at or prior to the time when the Container was filled, packed or stowed.
- (2) The Carrier does not accept liability for damage due to the unsuitability or defective condition of any equipment supplied by the Merchant.
- (3) Containers supplied by or on behalf of the Carrier shall be returned to the Carrier with interiors clean, odour free to the point or place designated by the Carrier and in the same order and condition as handed over to the Merchant at the port of loading or any other inland destination and within the time prescribed in the Carrier's tariff or elsewhere. Should a Container not be returned in such manner the Merchant shall be liable for any detention, loss or expense incurred as a result thereof.
- (4) Containers released into the care of the Merchant for packing, unpacking or any other purpose whatsoever are at the sole risk of the Merchant until redelivered to the Carrier. The Merchant shall indemnify the Carrier for all loss of and/or damage and/or delay to such Containers. Merchants are deemed to be aware of the dimensions and capacity of any Containers released to them.

19. **Dangerous Goods**

- (1) The Merchant shall comply with all internationally recognised requirements and all rules which apply according to national law or by reason of international Convention, relating to the carriage of Goods of a dangerous nature, and shall in any event inform the Carrier in writing of the exact nature of the danger before Goods of a dangerous nature are taken into charge by the Carrier and indicate to it, if need be, the precautions to be taken.
- (2) Goods of a dangerous nature which the Carrier did not know were dangerous, may, at any time or place, be unloaded, destroyed, or rendered harmless, without compensation. The Merchant shall be liable for all expenses, loss or damage arising out of their handing over for carriage or of their carriage.
- (3) If any Goods shipped with the knowledge of the Carrier as to their dangerous nature shall become a danger to any person or property, they may in a like manner be landed at any place or destroyed or rendered innocuous by the Carrier without liability on the part of the Carrier except to General Average.
- (4) Any hazardous cargo to be clearly marked with an asterisk on page two overleaf.

20. **Freight and Charges**

- (1) The freight payable hereunder has been calculated and based on particulars of the Goods furnished by or on behalf of the Merchant. The Carrier shall be entitled at any time to reweigh, remeasure or revalue the Goods and for this purpose to open and remove and examine the contents of any Container(s) and if the particulars furnished are found to be incorrect, the freight shall be adjusted accordingly with a surcharge of 30% of the adjusted freight and the Merchant shall also pay any expenses incurred by the Carrier in checking the said particulars.
- (2) Freight shall be deemed completely earned on receipt of the Goods by the Carrier and shall not be returnable in any event. Goods and/or Vessel lost or not lost and shall be paid by the Merchant immediately without any set-off, counter-claim or deduction or stay of execution but at latest before delivery of the cargo.
- (3) Charges and/or expenses and/or claims, fines, penalties, damages, costs and other amounts which may be incurred or imposed upon Carrier by reason of any breach by Merchant of any of the terms and provisions of this Bill of Lading or of any statutory or regulatory requirement or to be paid by the Merchant as agreed and/or under the conditions of this Bill of Lading and/or under the statutory law are payable on demand shall be considered definitely payable in like manner as soon as the charges/expenses have been incurred.
- (4) Merchants shall be jointly and severally liable to Carrier for freight, charges, expenses, demurrage, detention, advances and any and all costs and shall be liable to the Carrier for the cost and expenses of recovering such sums. The Carrier shall also have a lien against the Merchant on the Goods and any document relating thereto for all sums due from him to the Carrier in connection with any other shipment of the Merchant. The Carrier may exercise its lien at any time and place in its sole discretion and may dispose of or sell the Goods privately or by public auction without notice to the Merchant.

21. **Lien**

The Carrier shall have a lien on the Goods and any documents relating thereto which shall survive delivery of the Goods for any sums whatsoever payable by or chargeable to or for the account of the Merchant under this Bill of Lading and any contract preliminary hereto and for general average contributions to whomsoever due and for the cost and expenses of recovering such sums. The Carrier shall also have a lien against the Merchant on the Goods and any document relating thereto for all sums due from him to the Carrier in connection with any other shipment of the Merchant. The Carrier may exercise its lien at any time and place in its sole discretion and may dispose of or sell the Goods privately or by public auction without notice to the Merchant.

22. **General Average**

- (1) General Average shall be adjusted at any port or place at the Carrier's option, and to be settled according to the York-Antwerp Rules 1994, this covering all Goods whether carried on or under deck. The New Jason Clause, as approved by BIMCO, to be considered as incorporated herein.
- (2) Security including a cash deposit as the Carrier may deem sufficient to cover the estimated contribution of the Goods and any salvage and special charges thereon, shall, if required, be submitted to the Carrier prior to delivery of the Goods.

23. **Both-to-Blame Collision Clause**

The Both-to-Blame Collision Clause as adopted by BIMCO shall be considered incorporated herein.

24. **U.S. Trade**

- (1) In case the contract evidenced by this Bill of Lading is subject to the Carriage of Goods by Sea Act of the United States of America, 1936 (U.S. COGSA), then the provisions stated in the said Act shall govern before loading and after discharge and throughout the entire time the Goods are in the Carrier's custody.
- (2) If the U.S. COGSA applies, and unless the nature and value of the Goods have been declared by the shipper before the Goods have been handed over to the Carrier and inserted in this Bill of Lading, the Carrier shall in no event be or become liable for any loss of or damage to the Goods in an amount exceeding USD 500 per package or customary freight unit.
- (3) The Southern District Court of New York to have sole jurisdiction in cases that are litigated for cargo shipped to or from the United States of America.

24. **Non-Waiver and Severability**

Nothing in this Bill of Lading shall operate to deprive the Carrier of any statutory protection or defence, immunity, exemption, limitation of or exoneration from liability contained in applicable laws. The Terms and Conditions of this Bill of Lading (including all the terms and conditions of the Carrier's applicable tariff incorporated herein by virtue of Clause 3 above) shall be separable, and if any part or term hereof shall be held invalid, this shall not affect the validity or enforceability of any other part or term hereof.

Shipper Esko-Graphics Imaging GmbH Zusestraße 4a 25524 Itzehoe Germany		B/L No. GCHAM26090083	
Consigned to order of Litogrimann S.A. de CV Calle Santiago Graff Num 103. Naves A y B Parque Industrial Exportec I 50200 Toluca, MEX Mexico		 115, OMONIA AVENUE PAROUTIS BLDG., 3 rd Floor 3045 LIMASSOL	
Notify Party and address Litogrimann S.A. de CV Calle Santiago Graff Num 103. Naves A y B Parque Industrial Exportec I 50200 Toluca, MEX Mexico			
Ocean Vessel GSL MARIA	Voyage No. SAC1971	Port of Loading Bremerhaven	Place of Acceptance Iserlohn
Port of Discharge Veracruz	Place of Delivery Veracruz	Freight payable	Number of original Bills of Lading E / Express B/L
Marks and Nos. Litogrimann S.A. Mexico		Quantity and description of goods 1 Pallet(s) S.T.C. Laser Imaging System CDI HS Code: 84423000	Gross weight, kg Measurement, m ³ 1.080kg

DRAFT

All particulars above declared by Merchant	
For delivery of cargo please apply to Interteam SA de CV Colima 114 Desp 201 Col. Roma 06700 Cuauhtemoc, MEX Mexico	RECEIVED for shipment the above mentioned goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above. The Carrier in accordance with the provisions contained on this side and on the reverse side of this document; a) undertakes to perform or to procure the performance of the entire transport from the place at which the goods are taken in charge to the place designated for delivery in this document, and b) assumes liability as prescribed in this document for such transport. One of the Bills of Lading must be surrendered duly endorsed in exchange for the goods or delivery order. IN WITNESS whereof three (3) original Bs/L have been signed , if not otherwise stated above, one of which being accomplished the other(s) to be void.
	Place and date of issue Norderstedt / 2026-SEP-04
Declared value of the goods (see clause 12) US\$ _____ Ad valorem freight paid: _____ NOTE: The merchant's attention is called to the fact that according to clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay.	Signed for the carrier  as agents of carrier G.C.S. Container Line Ltd.

1. **Applicability**

Notwithstanding the heading "Combined Transport", the provisions set out and referred to in this Bill of Lading shall also apply, if the transport as described in this Bill of Lading is performed by one mode of transport only.

2. **Definitions**

"Carrier" means the party on whose behalf this Bill of Lading has been signed. "Merchant" includes the Shipper, the Receiver, the Consignor, and the Consignee, the holder of this Bill of Lading and the owner of the Goods or person entitled to the possession of the Goods and the servants and agents and principals of any of these, all of whom shall be jointly and severally liable to the Carrier for the payment of Freight, and for the performance of the obligations of any of them under this Bill of Lading. "Goods" means the cargo received from the Shipper and includes a Container not supplied by the Carrier. "Container" includes a container, trailer, transportable tank, flat rack, pallet or any other article used to consolidate Goods or any equipment thereof or connected thereto. "Carriage" means the whole of the operations and the services undertaken by the Carrier in respect of the Goods. "Combined Transport" arises when the Place of Acceptance and/or the Place of Delivery are set out on page two overleaf in the relevant margins.

3. **Carrier's Tariff**

The terms of the Carrier's applicable Tariff at the date of shipment are incorporated herein. Copies of the relevant provisions of the applicable Tariff are available from the Carrier or its agents. In the case of inconsistency between this Bill of Lading and the applicable Tariff, this Bill of Lading shall prevail.

4. **Time Bar**

All liability, whatsoever, of the Carrier shall cease unless suit is brought within 9 months after delivery of the Goods or the date when the Goods should have been delivered.

5. **Law and Jurisdiction**

Except as otherwise provided specifically herein, disputes arising under this Bill of Lading or in connection therewith shall be determined exclusively by the High Court of Justice in London and in accordance with the English law. Any actions against the Merchant may, at the Carrier's sole option, also be brought in the countries of the Port of Loading, Port of Discharge, Place of Delivery or in any jurisdiction where the Merchant has a place of business.

6. **Subcontracting**

The Carrier shall be entitled to subcontract the whole or any part of the contract of Carriage, loading, unloading, storing, warehousing, handling including, but not limited to all duties usually undertaken by a Carrier.

7. **Methods and Routes of Transportation**

The Carrier may at any time and without notice to the Merchant:

- (a) use any means of transport (water, land and/or air) or storage whatsoever;
- (b) transship or carry the Goods on another vessel or conveyance or by any other means of transport than that named on page two overleaf;
- (c) proceed by any route in its sole and absolute discretion and whether the nearest, most direct, customary or advertised route at any speed, and proceed to or stay at any place whatsoever once or more often and in any order or omit calling at any port, whether scheduled or not;
- (d) terminate the transportation and discharge Goods or Containers or other packages and devan and/or store contents at any place whatsoever, ashore or afloat, in the open or covered, and require the Merchant to take delivery and, upon failure to do so, warehouse the Goods at risk and expense of Merchant and Goods;
- (e) comply with any orders, directions or recommendations given by any government or authority or by any person or body acting or purporting to act with the authority of any government or authority or having under the terms of the insurance on the Vessel or other conveyance employed by the Carrier the right to give such orders, directions or recommendations;
- (f) take any other steps or precautions as may appear reasonable to the Carrier under the circumstances.

The liberties set out in Clause 7(a) through 7(f) may be invoked for any purpose whatsoever even if not connected with the carriage covered by this Bill of Lading, and any action taken or omitted to be taken, and any delay arising therefrom, shall be deemed to be within the contractual and contemplated carriage and not be an unreasonable deviation. Notwithstanding, the Carrier shall be entitled to full charges and any additional freight, storage and all other expenses incurred by or on behalf of Carrier, all of which shall be due and owing from Merchant, and the Carrier shall have a lien on the Goods for same.

8. **Optional Storage**

- (1) Goods may be stowed by the Carrier by means of and in, for example, Containers, trailers, transportable tanks, flats, pallets, or similar articles of transport used to consolidate Goods.
- (2) Containers, trailers, transportable tanks and covered and uncovered flats, whether stowed by the Carrier or received by it in a stowage condition from the Merchant, may be carried on or under deck without notice to the Merchant and if so carried, the legislation referred to in Clause 11 below shall apply notwithstanding carriage on deck and the Goods and/or Containers shall contribute to General Average as if carried under deck.

Notwithstanding anything contained in this Clause the Carrier shall be under no liability whatsoever for loss, damage or delay howsoever occurring to Goods stated on page two overleaf hereof to be carried on deck or so carried or to live animals whether or not carried on or under deck.

9. **Hindrances affecting performance**

- (1) The Carrier shall use reasonable endeavours to complete the transport and to deliver the Goods at the place designated for delivery or as near thereto as under the prevailing circumstances possible.
- (2) If at any time the performance of the contract as evidenced by this Bill of Lading is or will be affected by any hindrance, risk, delay, difficulty or disadvantage of whatsoever kind the Carrier (whether or not the transport is commenced) may at any time at its sole discretion and without notice to the Merchant:
- (a) abandon the Carriage of the Goods and where reasonably possible place the Goods or any part of them at the Merchant's disposal at any place which the Carrier may deem safe and convenient, whereupon the responsibility of the Carrier in respect of such Goods shall cease, or sell the Goods;
- (b) without prejudice to the Carrier's right to abandon the Carriage under Sub-Clause (a) above, continue the Carriage.
- (3) In any event the Carrier shall be entitled to full freight for Goods received for transportation and additional compensation for extra costs resulting from the circumstances referred to above. The Carrier exercising the liberties under this Clause shall not be under any obligation to take any particular measure and shall not be liable for any loss, delay or damage howsoever arising from any action or lack of action under this Clause.
- (4) The liability of the Carrier in respect of the Goods shall cease on the delivery or other disposition of the Goods in accordance with the orders or recommendations given by any government or authority or any person acting or purporting to act as or on behalf of such government or authority.

10. **Option of Inspection**

The Carrier may at its option open any Container or package to inspect the contents. If it appears that any part thereof cannot safely or properly be carried, either at all or without incurring additional expense, the Carrier may abandon the transportation and/or take any measures and/or incur any reasonable additional expenses to continue carriage or store Goods, which storage shall be deemed to constitute due delivery hereunder. The Merchant shall indemnify the Carrier against any reasonable additional Charges so incurred, unless due solely to the Carrier's fault.

11. **Basic Liability**

(1) The Carrier shall be liable for loss of or damage to the Goods occurring between the time when it receives the Goods into its charge and the time of delivery. In case of a multimodal transport and if the place of damage or loss of the Goods is known, the responsibility of the Carrier is determined by

such loss or damage arose or resulted from

- (a) act or neglect of the Merchant.
- (b) compliance with the instructions of the person(s) entitled to give them.
- (c) the lack of, or defective conditions of packing in the case of Goods which, by their nature, are liable to wastage or to be damaged when not packed or when not properly packed.
- (d) handling, loading, stowage or unloading of the Goods by or on behalf of the Merchant.
- (e) inherent vice of the Goods.
- (f) insufficiency or inadequacy of marks or numbers on the Goods, covering, or unit loads.
- (g) strikes or lock-outs or stoppages or restraints of labour from whatever cause whether partial or general.
- (h) nuclear incident.
- (i) act, neglect or default of the master, mariner, pilot or the servants of the Carrier in the navigation or in the management of the vessel.
- (j) fire, unless caused by the actual fault or privity of the Carrier.
- (k) act and instructions of governments, of prince and rulers, act of god, force majeure or authorities (including customs authorities) performing their duties.
- (l) independent subcontractors not appointed by or in the direct services of the Carrier.
- (m) any cause or event which the Carrier could not avoid and the consequence whereof it could not prevent by the exercise of reasonable diligence.
- (3) Where under Clause 11 (2) the Carrier is not under any liability in respect of some of the factors causing the loss or damage, it shall only be liable to the extent that those factors for which it is liable under this Clause have contributed to the loss or damage.
- (4) It shall be presumed that a damage which under the circumstances of the case could be attributed to the causes or events specified in Clause 11 (2) were caused by these causes or events. The Merchant shall however be entitled to prove that the loss or damage was not in fact caused either wholly or partly by one or more of these causes or events.

12. **Limits of Liability**

- (1) When the Carrier is liable for compensation in respect of loss of or damage to the Goods, such compensation shall be calculated by reference to the value of such Goods they would have had at the place and time they were delivered to the Merchant in accordance with the contract or when they should have been so delivered.
- (2) The sound value of the Goods shall be fixed according to the commodity exchange price or, if there is no such price, according to the current market price or, if there be no commodity exchange price or current market price, by reference to the normal value of Goods of the same kind and quality and is presumed to be the FOB/CFR invoice value plus freight and insurance if paid.
- (3) Compensation per Bill of Lading for Goods lost or damaged or for other damages shall not exceed US\$ 1,000.00 legal tender of the USA.
- (4) Compensation shall not, however, exceed the limits of the Hague Rules, Hague-Visby Rules/ US COGSA 1936/ or any other limit set under the applicable Conventions. In all other events the compensation shall not exceed US\$ 2.00 per kilo of gross weight of the Goods.
- (5) Higher compensation may be claimed only when, with the consent of the Carrier, the value for the Goods declared by the Shipper and which exceeds the limits laid down in this Clause has been stated on page two overleaf of this Bill of Lading at the place indicated and when an ad valorem freight has been paid. In that case the amount of the declared value shall be substituted for that limit.

13. **Special Provisions for Liability and Compensation**

- (1) Notwithstanding anything provided for in Clauses 11 and 12 above, the loss or damage of the Carrier and or the Merchant shall, in respect of liability of the Carrier, be determined by the provisions contained in any International Convention or national law which provisions cannot be departed from by private contract, to the detriment of the claimants and which would have applied if the Merchant had made a separate and direct contract with the Carrier in respect of the particular stage of transport where the loss or damage occurred and if there was received as evidence thereof any particular document which must be issued if such International Convention or national law shall apply.
- (2) If neither the Hague- or Hague-Visby Rules or US COGSA 1936 or The Water Carriage Act of 1936 apply to carriage by sea by virtue of the foregoing provisions, the liability of the Carrier in respect of any carriage by sea shall be determined by the International Convention for the Unification of certain rules relating to Bills of Lading dated 25 August 1924 (Hague Rules) and any subsequent amendments thereto. The Hague-/Hague-Visby Rules shall also determine the liability of the Carrier in respect of carriage by inland waterways as if such carriage were carriage by sea. They shall also apply to all Goods whether carried on deck or under deck.
- (3) If it cannot be proven where or when or at what stage of the Carriage the Goods were lost or damaged, it shall be conclusively deemed to have occurred whilst at sea and the Carrier's liability, if any, shall be determined in accordance with the provisions of Clause 13 (2).
- (4) If the place of receipt or place of delivery is not named on page two overleaf
- (a) the Carrier shall be under no liability whatsoever for loss of or damage to the Goods, howsoever occurring, if such loss or damage arises prior to loading onto the vessel;
- (b) if the place of delivery is not named on the face hereof, the Carrier shall be under no liability whatsoever for loss of or damage to the Goods, howsoever occurring, if such loss or damage arises subsequent to discharge from the vessel.
- (5) Clauses 11 to 13 of this Bill of Lading apply in addition to and shall not be construed as derogating from any defence or exclusion, restriction or limitation of liability available to the Carrier under the terms of this Bill of Lading or otherwise.

14. **Delay, Consequential Loss**

Unless expressly agreed, the Carrier does not undertake that the Goods shall arrive at the Port of Discharge or Place of Delivery at any particular time or to meet any particular market or use, and the Carrier shall not be liable for direct, indirect or consequential loss or damage caused by delay. If the Carrier should nevertheless be held legally liable for any such direct or indirect or consequential loss or damage caused by such alleged delay, such liability shall be limited to the freight for the transport covered by this Bill of Lading, or to the value of the Goods as determined in Clause 12, whichever is the lesser.

15. **Notice of Loss of or Damage to the Goods**

- (1) Unless notice of loss of or damage to the Goods, specifying the general nature of such loss or damage, is given in writing by the Merchant to the Carrier when the Goods are handed over to the Merchant, such handing over is prima facie evidence of the delivery by the Carrier of the Goods as described in this Bill of Lading.
- (2) Where the loss or damage is not apparent, the same prima facie effect shall apply if notice in writing is not given within three (3) consecutive days after the day when the Goods were handed over to the Merchant.

16. **Defences and Limits for the Carrier, Servants, etc.**

- (1) The defences and limits of liability provided for in this Bill of Lading shall apply in any action against the Carrier for loss or damage to the Goods whether the action be founded in contract, bailment or in tort and even if the loss or damage arose as a result of unseaworthiness, negligence or fundamental breach of contract.
- (2) The Merchant undertakes that no claim shall be made against any servant, agent, Subcontractor or other persons whose services the Carrier has used in order to perform this Contract and if a claim is nevertheless made, to indemnify the Carrier against all consequences thereof.
- (3) Without prejudice to the foregoing every such servant, agent, and Subcontractor shall have the benefit of all Terms and Conditions of

its own behalf, and also as agent and trustee for such servants, agents and Subcontractors.

17. **Merchant's Responsibility**

The Merchant shall be deemed to have guaranteed to the Carrier the accuracy, at the time the Goods were taken in charge by the Carrier, of the description of the Goods, marks, numbers, quantity and weight, as furnished by it and the Merchant shall defend, indemnify and hold harmless the Carrier against all loss, damage and expenses arising or resulting from inaccuracies in or inadequacy of such particulars. The Merchant shall remain liable even if the Bill of Lading has been transferred.

18. **Shipper-packed Containers**

- (1) If a Container has not been loaded, packed or stowed by the Carrier, the latter shall not be liable for loss of or damage to its contents and the Merchant shall cover any loss or expense incurred by the Carrier, if such loss, damage or expense has been caused by:
- (a) negligent loading, packing or stowing of the Container;
- (b) the contents being unsuitable for carriage in Container; or
- (c) the unsuitability or defective condition of the Container unless the Container has been supplied by the Carrier and the unsuitability or defective condition would not have been apparent upon reasonable inspection at or prior to the time when the Container was filled, packed or stowed.
- (2) The Carrier does not accept liability for damage due to the unsuitability or defective condition of any equipment supplied by the Merchant.
- (3) Containers supplied by or on behalf of the Carrier shall be returned to the Carrier with interiors clean, odour free to the point or place designated by the Carrier and in the same order and condition as handed over to the Merchant at the port of loading or any other inland destination and within the time prescribed in the Carrier's tariff or elsewhere. Should a Container not be returned in such manner the Merchant shall be liable for any detention, loss or expense incurred as a result thereof.
- (4) Containers released into the care of the Merchant for packing, unpacking or any other purpose whatsoever are at the sole risk of the Merchant until redelivered to the Carrier. The Merchant shall indemnify the Carrier for all loss of and/or damage and/or delay to such Containers. Merchants are deemed to be aware of the dimensions and capacity of any Containers released to them.

19. **Dangerous Goods**

- (1) The Merchant shall comply with all internationally recognised requirements and all rules which apply according to national law or by reason of international Convention, relating to the carriage of Goods of a dangerous nature, and shall in any event inform the Carrier in writing of the exact nature of the danger before Goods of a dangerous nature are taken into charge by the Carrier and indicate to it, if need be, the precautions to be taken.
- (2) Goods of a dangerous nature which the Carrier did not know were dangerous, may, at any time or place, be unloaded, destroyed, or rendered harmless, without compensation. The Merchant shall be liable for all expenses, loss or damage arising out of their handing over for carriage or of their carriage.
- (3) If any Goods shipped with the knowledge of the Carrier as to their dangerous nature shall become a danger to any person or property, they may in a like manner be landed at any place or destroyed or rendered innocuous by the Carrier without liability on the part of the Carrier except to General Average.
- (4) Any hazardous cargo to be clearly marked with an asterisk on page two overleaf.

20. **Freight and Charges**

- (1) The freight payable hereunder has been calculated and based on particulars of the Goods furnished by or on behalf of the Merchant. The Carrier shall be entitled at any time to reweigh, remeasure or revalue the Goods and for this purpose to open and remove and examine the contents of any Container(s) and if the particulars furnished are found to be incorrect, the freight shall be adjusted accordingly with a surcharge of 30% of the adjusted freight and the Merchant shall also pay any expenses incurred by the Carrier in checking the said particulars.
- (2) Freight shall be deemed completely earned on receipt of the Goods by the Carrier and shall not be returnable in any event. Goods and/or Vessel lost or not lost and shall be paid by the Merchant immediately without any set-off, counter-claim or deduction or stay of execution but at latest before delivery of the cargo.
- (3) Charges and/or expenses and/or claims, fines, penalties, damages, costs and other amounts which may be incurred or imposed upon Carrier by reason of any breach by Merchant of any of the terms and provisions of this Bill of Lading or of any statutory or regulatory requirement or to be paid by the Merchant as agreed and/or under the conditions of this Bill of Lading and/or under the statutory law are payable on demand shall be considered definitely payable in like manner as soon as the charges/expenses have been incurred.
- (4) Merchants shall be jointly and severally liable to Carrier for freight, charges, expenses, demurrage, detention, advances and any and all costs and expenses incurred by the Carrier in connection with the carriage of the Goods to take delivery whether or not page two overleaf has been marked "prepaid" or "collect" so long as freight, charges, expenses etc. (see above) remain unpaid.

21. **Lien**

The Carrier shall have a lien on the Goods and any documents relating thereto which shall survive delivery of the Goods for any sums whatsoever payable by or chargeable to or for the account of the Merchant under this Bill of Lading and any contract preliminary hereto and for general average contributions to whomsoever due and for the cost and expenses of recovering such sums. The Carrier shall also have a lien against the Merchant on the Goods and any document relating thereto for all sums due from him to the Carrier in connection with any other shipment of the Merchant. The Carrier may exercise its lien at any time and place in its sole discretion and may dispose of or sell the Goods privately or by public auction without notice to the Merchant.

22. **General Average**

- (1) General Average shall be adjusted at any port or place at the Carrier's option, and to be settled according to the York-Antwerp Rules 1994, this covering all Goods whether carried on or under deck. The New Jason Clause, as approved by BIMCO, to be considered as incorporated herein.
- (2) Security including a cash deposit as the Carrier may deem sufficient to cover the estimated contribution of the Goods and any salvage and special charges thereon, shall, if required, be submitted to the Carrier prior to delivery of the Goods.

23. **Both-to-Blame Collision Clause**

The Both-to-Blame Collision Clause as adopted by BIMCO shall be considered incorporated herein.

24. **U.S. Trade**

- (1) In case the contract evidenced by this Bill of Lading is subject to the Carriage of Goods by Sea Act of the United States of America, 1936 (U.S. COGSA), then the provisions stated in the said Act shall govern before loading and after discharge and throughout the entire time the Goods are in the Carrier's custody.
- (2) If the U.S. COGSA applies, and unless the nature and value of the Goods have been declared by the shipper before the Goods have been handed over to the Carrier and inserted in this Bill of Lading, the Carrier shall in no event be or become liable for any loss of or damage to the Goods in an amount exceeding USD 500 per package or customary freight unit.
- (3) The Southern District Court of New York to have sole jurisdiction in cases that are litigated for cargo shipped to or from the United States of America.

24. **Non-Waiver and Severability**

Nothing in this Bill of Lading shall operate to deprive the Carrier of any statutory protection or defence, immunity, exemption, limitation of or exoneration from liability contained in applicable laws. The Terms and Conditions of this Bill of Lading (including all the terms and conditions of the Carrier's applicable tariff incorporated herein by virtue of Clause 3 above) shall be separable, and if any part or term hereof shall be held invalid, this shall not affect the validity or enforceability of any other part or term hereof.

Shipper AUMUND Fördertechnik GmbH Saalhofer Str. 17 47495 Rheinberg Germany		B/L No. GCHAM26090122	
Consigned to order of Cementos Fortaleza SA de CV Casco del Rancho Bateje 2 KM al este del Km 5 de la Carr. 42980 Hidalgo, MEX Mexico		 115, OMONIA AVENUE PAROUTIS BLDG., 3 rd Floor 3045 LIMASSOL	
Notify Party and address Cementos Fortaleza SA de CV Casco del Rancho Bateje 2 KM al este del Km 5 de la Carr. 42980 Hidalgo, MEX Mexico			
Ocean Vessel GSL MARIA	Voyage No. SAC1971	Port of Loading Bremerhaven	Place of Acceptance Viersen
Port of Discharge Veracruz	Place of Delivery Veracruz CFS	Freight payable Veracruz	Number of original Bills of Lading E / Express B/L
Marks and Nos.		Quantity and description of goods	Gross weight, kg Measurement, m ³
Cementos Fortaleza SA de CV Casco del Rancho Bateje 2 KM al este del Km 5 de la Carr. Atitalaquia Apaxco, El Refugio Atotonilco de Tula 42980 Hidalgo C.P. MEXICO		1 Pallet(s) s.t.c. spare parts HS Code: 84313900	144kg
DRAFT			
All particulars above declared by Merchant			
For delivery of cargo please apply to InterTEAM SA de CV Colima 114 Desp 201 Col. Roma 06700 Cuauhtemoc, MEX Mexico		RECEIVED for shipment the above mentioned goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above. The Carrier in accordance with the provisions contained on this side and on the reverse side of this document: a) undertakes to perform or to procure the performance of the entire transport from the place at which the goods are taken in charge to the place designated for delivery in this document, and b) assumes liability as prescribed in this document for such transport. One of the Bills of Lading must be surrendered duly endorsed in exchange for the goods or delivery order. IN WITNESS whereof three (3) original Bs/L have been signed, if not otherwise stated above, one of which being accomplished the other(s) to be void.	
		Place and date of issue Norderstedt / 2026-SEP-04	
Declared value of the goods (see clause 12) US\$ _____ Ad valorem freight paid: _____ NOTE: The merchant's attention is called to the fact that according to clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay.		Signed for the carrier  as agents of carrier G.C.S. Container Line Ltd.	

1. **Applicability**

Notwithstanding the heading "Combined Transport", the provisions set out and referred to in this Bill of Lading shall also apply, if the transport as described in this Bill of Lading is performed by one mode of transport only.

2. **Definitions**

"Carrier" means the party on whose behalf this Bill of Lading has been signed. "Merchant" includes the Shipper, the Receiver, the Consignor, and the Consignee, the holder of this Bill of Lading and the owner of the Goods or person entitled to the possession of the Goods and the servants and agents and principals of any of these, all of whom shall be jointly and severally liable to the Carrier for the payment of Freight, and for the performance of the obligations of any of them under this Bill of Lading. "Goods" means the cargo received from the Shipper and includes a Container not supplied by the Carrier. "Container" includes a container, trailer, transportable tank, flat rack, pallet or any other article used to consolidate Goods or any equipment thereof or connected thereto. "Carriage" means the whole of the operations and the services undertaken by the Carrier in respect of the Goods. "Combined Transport" arises when the Place of Acceptance and/or the Place of Delivery are set out on page two overleaf in the relevant margins.

3. **Carrier's Tariff**

The terms of the Carrier's applicable Tariff at the date of shipment are incorporated herein. Copies of the relevant provisions of the applicable Tariff are available from the Carrier or its agents. In the case of inconsistency between this Bill of Lading and the applicable Tariff, this Bill of Lading shall prevail.

4. **Time Bar**

All liability, whatsoever, of the Carrier shall cease unless suit is brought within 9 months after delivery of the Goods or the date when the Goods should have been delivered.

5. **Law and Jurisdiction**

Except as otherwise provided specifically herein, disputes arising under this Bill of Lading or in connection therewith shall be determined exclusively by the High Court of Justice in London and in accordance with the English law. Any actions against the Merchant may, at the Carrier's sole option, also be brought in the countries of the Port of Loading, Port of Discharge, Place of Delivery or in any jurisdiction where the Merchant has a place of business.

6. **Subcontracting**

The Carrier shall be entitled to subcontract the whole or any part of the contract of Carriage, loading, unloading, storing, warehousing, handling including, but not limited to all duties usually undertaken by a Carrier.

7. **Methods and Routes of Transportation**

The Carrier may at any time and without notice to the Merchant:

- (a) use any means of transport (water, land and/or air) or storage whatsoever;
- (b) transship or carry the Goods on another vessel or by conveyance or by any other means of transport than that named on page two overleaf;
- (c) proceed by any route in its sole and absolute discretion and whether the nearest, most direct, customary or advertised route at any speed, and proceed to or stay at any place whatsoever once or more often and in any order or omit calling at any port, whether scheduled or not;
- (d) terminate the transportation and discharge Goods or Containers or other packages and devan and/or store contents at any place whatsoever, ashore or afloat, in the open or covered, and require the Merchant to take delivery and, upon failure to do so, warehouse the Goods at risk and expense of Merchant and Goods;
- (e) comply with any orders, directions or recommendations given by any government or authority or by any person or body acting or purporting to act with the authority of any government or authority or having under the terms of the insurance on the Vessel or other conveyance employed by the Carrier the right to give such orders, directions or recommendations;
- (f) take any other steps or precautions as may appear reasonable to the Carrier under the circumstances.

The liberties set out in Clause 7(a) through 7(f) may be invoked for any purpose whatsoever even if not connected with the carriage covered by this Bill of Lading, and any action taken or omitted to be taken, and any delay arising therefrom, shall be deemed to be within the contractual and contemplated carriage and not be an unreasonable deviation. Notwithstanding, the Carrier shall be entitled to full charges and any additional freight, storage and all other expenses incurred by or on behalf of Carrier, all of which shall be due and owing from Merchant, and the Carrier shall have a lien on the Goods for same.

8. **Optional Storage**

- (1) Goods may be stowed by the Carrier by means of and in, for example, Containers, trailers, transportable tanks, flats, pallets, or similar articles of transport used to consolidate Goods.
- (2) Containers, trailers, transportable tanks and covered and uncovered flats, whether stowed by the Carrier or received by it in a stowage condition from the Merchant, may be carried on or under deck without notice to the Merchant and if so carried, the legislation referred to in Clause 11 below shall apply notwithstanding carriage on deck and the Goods and/or Containers shall contribute to General Average as if carried under deck.

Notwithstanding anything contained in this Clause the Carrier shall be under no liability whatsoever for loss, damage or delay howsoever occurring to Goods stated on page two overleaf hereof to be carried on deck or so carried or to live animals whether or not carried on or under deck.

9. **Hindrances affecting performance**

- (1) The Carrier shall use reasonable endeavours to complete the transport and to deliver the Goods at the place designated for delivery or as near thereto as under the prevailing circumstances possible.
- (2) If at any time the performance of the contract as evidenced by this Bill of Lading is or will be affected by any hindrance, risk, delay, difficulty or disadvantage of whatsoever kind the Carrier (whether or not the transport is commenced) may at any time at its sole discretion and without notice to the Merchant:
- (a) abandon the Carriage of the Goods and where reasonably possible place the Goods or any part of them at the Merchant's disposal at any place which the Carrier may deem safe and convenient, whereupon the responsibility of the Carrier in respect of such Goods shall cease, or sell the Goods;
- (b) without prejudice to the Carrier's right to abandon the Carriage under Sub-Clause (a) above, continue the Carriage.
- (3) In any event the Carrier shall be entitled to full freight for Goods received for transportation and additional compensation for extra costs resulting from the circumstances referred to above. The Carrier exercising the liberties under this Clause shall not be under any obligation to take any particular measure and shall not be liable for any loss, delay or damage howsoever arising from any action or lack of action under this Clause.
- (4) The liability of the Carrier in respect of the Goods shall cease on the delivery or other disposition of the Goods in accordance with the orders or recommendations given by any government or authority or any person acting or purporting to act as or on behalf of such government or authority.

10. **Option of Inspection**

The Carrier may at its option open any Container or package to inspect the contents. If it appears that any part thereof cannot safely or properly be carried, either at all or without incurring additional expense, the Carrier may abandon the transportation and/or take any measures and/or incur any reasonable additional expenses to continue carriage or store Goods, which storage shall be deemed to constitute due delivery hereunder. The Merchant shall indemnify the Carrier against any reasonable additional Charges so incurred, unless due solely to the Carrier's fault.

11. **Basic Liability**

(1) The Carrier shall be liable for loss of or damage to the Goods occurring between the time when it receives the Goods into its charge and the time of delivery. In case of a multimodal transport and if the place of damage or loss of the Goods is known, the responsibility of the Carrier is determined by

such loss or damage arose or resulted from

- (a) act or neglect of the Merchant.
- (b) compliance with the instructions of the person(s) entitled to give them.
- (c) the lack of, or defective conditions of packing in the case of Goods which, by their nature, are liable to wastage or to be damaged when not packed or when not properly packed.
- (d) handling, loading, stowage or unloading of the Goods by or on behalf of the Merchant.
- (e) inherent vice of the Goods.
- (f) insufficiency or inadequacy of marks or numbers on the Goods, covering, or unit loads.
- (g) strikes or lock-outs or stoppages or restraints of labour from whatever cause whether partial or general.
- (h) nuclear incident.
- (i) act, neglect or default of the master, mariner, pilot or the servants of the Carrier in the navigation or in the management of the vessel.
- (j) fire, unless caused by the actual fault or privity of the Carrier.
- (k) act and instructions of governments, of prince and rulers, act of god, force majeure or authorities (including customs authorities) performing their duties.
- (l) independent subcontractors not appointed by or in the direct services of the Carrier.
- (m) any cause or event which the Carrier could not avoid and the consequence whereof it could not prevent by the exercise of reasonable diligence.
- (3) Where under Clause 11 (2) the Carrier is not under any liability in respect of some of the factors causing the loss or damage, it shall only be liable to the extent that those factors for which it is liable under this Clause have contributed to the loss or damage.
- (4) It shall be presumed that a damage which under the circumstances of the case could be attributed to the causes or events specified in Clause 11 (2) were caused by these causes or events. The Merchant shall however be entitled to prove that the loss or damage was not in fact caused either wholly or partly by one or more of these causes or events.

12. **Limits of Liability**

- (1) When the Carrier is liable for compensation in respect of loss of or damage to the Goods, such compensation shall be calculated by reference to the value of such Goods they would have had at the place and time they were delivered to the Merchant in accordance with the contract or when they should have been so delivered.
- (2) The sound value of the Goods shall be fixed according to the commodity exchange price or, if there is no such price, according to the current market price or, if there be no commodity exchange price or current market price, by reference to the normal value of Goods of the same kind and quality and is presumed to be the FOB/CFR invoice value plus freight and insurance if paid.
- (3) Compensation per Bill of Lading for Goods lost or damaged or for other damages shall not exceed US\$ 1,000.00 legal tender of the USA.
- (4) Compensation shall not, however, exceed the limits of the Hague Rules, Hague-Visby Rules/ US COGSA 1936/ or any other limit set under the applicable Conventions. In all other events the compensation shall not exceed US\$ 2.00 per kilo of gross weight of the Goods.
- (5) Higher compensation may be claimed only when, with the consent of the Carrier, the value for the Goods declared by the Shipper and which exceeds the limits laid down in this Clause has been stated on page two overleaf of this Bill of Lading at the place indicated and when an ad valorem freight has been paid. In that case the amount of the declared value shall be substituted for that limit.

13. **Special Provisions for Liability and Compensation**

- (1) Notwithstanding anything provided for in Clauses 11 and 12 above, the loss or damage of the Carrier and or the Merchant shall, in respect of liability of the Carrier, be determined by the provisions contained in any International Convention or national law which provisions cannot be departed from by private contract, to the detriment of the claimants and which would have applied if the Merchant had made a separate and direct contract with the Carrier in respect of the particular stage of transport where the loss or damage occurred and if there was received as evidence thereof any particular document which must be issued if such International Convention or national law shall apply.
- (2) If neither the Hague- or Hague-Visby Rules or US COGSA 1936 or The Water Carriage Act of 1936 apply to carriage by sea by virtue of the foregoing provisions, the liability of the Carrier in respect of any carriage by sea shall be determined by the International Convention for the Unification of certain rules relating to Bills of Lading dated 25 August 1924 (Hague Rules) and any subsequent amendments thereto. The Hague-/Hague-Visby Rules shall also determine the liability of the Carrier in respect of carriage by inland waterways as if such carriage were carriage by sea. They shall also apply to all Goods whether carried on deck or under deck.
- (3) If it cannot be proven where or when or at what stage of the Carriage the Goods were lost or damaged, it shall be conclusively deemed to have occurred whilst at sea and the Carrier's liability, if any, shall be determined in accordance with the provisions of Clause 13 (2).
- (4) If the place of receipt or place of delivery is not named on page two overleaf
- (a) the Carrier shall be under no liability whatsoever for loss of or damage to the Goods, howsoever occurring, if such loss or damage arises prior to loading onto the vessel;
- (b) if the place of delivery is not named on the face hereof, the Carrier shall be under no liability whatsoever for loss of or damage to the Goods, howsoever occurring, if such loss or damage arises subsequent to discharge from the vessel.
- (5) Clauses 11 to 13 of this Bill of Lading apply in addition to and shall not be construed as derogating from any defence or exclusion, restriction or limitation of liability available to the Carrier under the terms of this Bill of Lading or otherwise.

14. **Delay, Consequential Loss**

Unless expressly agreed, the Carrier does not undertake that the Goods shall arrive at the Port of Discharge or Place of Delivery at any particular time or to meet any particular market or use, and the Carrier shall not be liable for direct, indirect or consequential loss or damage caused by delay. If the Carrier should nevertheless be held legally liable for any such direct or indirect or consequential loss or damage caused by such alleged delay, such liability shall be limited to the freight for the transport covered by this Bill of Lading, or to the value of the Goods as determined in Clause 12, whichever is the lesser.

15. **Notice of Loss of or Damage to the Goods**

- (1) Unless notice of loss of or damage to the Goods, specifying the general nature of such loss or damage, is given in writing by the Merchant to the Carrier when the Goods are handed over to the Merchant, such handing over is prima facie evidence of the delivery by the Carrier of the Goods as described in this Bill of Lading.
- (2) Where the loss or damage is not apparent, the same prima facie effect shall apply if notice in writing is not given within three (3) consecutive days after the day when the Goods were handed over to the Merchant.

16. **Defences and Limits for the Carrier, Servants, etc.**

- (1) The defences and limits of liability provided for in this Bill of Lading shall apply in any action against the Carrier for loss or damage to the Goods whether the action be founded in contract, bailment or in tort and even if the loss or damage arose as a result of unseaworthiness, negligence or fundamental breach of contract.
- (2) The Merchant undertakes that no claim shall be made against any servant, agent, subcontractor or other persons whose services the Carrier has used in order to perform this Contract and if a claim is nevertheless made, to indemnify the Carrier against all consequences thereof.
- (3) Without prejudice to the foregoing every such servant, agent, and Subcontractor shall have the benefit of all Terms and Conditions of

its own behalf, and also as agent and trustee for such servants, agents and Subcontractors.

17. **Merchant's Responsibility**

The Merchant shall be deemed to have guaranteed to the Carrier the accuracy, at the time the Goods were taken in charge by the Carrier, of the description of the Goods, marks, numbers, quantity and weight, as furnished by it and the Merchant shall defend, indemnify and hold harmless the Carrier against all loss, damage and expenses arising or resulting from inaccuracies in or inadequacy of such particulars. The Merchant shall remain liable even if the Bill of Lading has been transferred.

18. **Shipper-packed Containers**

- (1) If a Container has not been loaded, packed or stowed by the Carrier, the latter shall not be liable for loss of or damage to its contents and the Merchant shall cover any loss or expense incurred by the Carrier, if such loss, damage or expense has been caused by:
- (a) negligent loading, packing or stowing of the Container;
- (b) the contents being unsuitable for carriage in Container; or
- (c) the unsuitability or defective condition of the Container unless the Container has been supplied by the Carrier and the unsuitability or defective condition would not have been apparent upon reasonable inspection at or prior to the time when the Container was filled, packed or stowed.
- (2) The Carrier does not accept liability for damage due to the unsuitability or defective condition of any equipment supplied by the Merchant.
- (3) Containers supplied by or on behalf of the Carrier shall be returned to the Carrier with interiors clean, odour free to the point or place designated by the Carrier and in the same order and condition as handed over to the Merchant at the port of loading or any other inland destination and within the time prescribed in the Carrier's tariff or elsewhere. Should a Container not be returned in such manner the Merchant shall be liable for any detention, loss or expense incurred as a result thereof.
- (4) Containers released into the care of the Merchant for packing, unpacking or any other purpose whatsoever are at the sole risk of the Merchant until redelivered to the Carrier. The Merchant shall indemnify the Carrier for all loss of and/or damage and/or delay to such Containers. Merchants are deemed to be aware of the dimensions and capacity of any Containers released to them.

19. **Dangerous Goods**

- (1) The Merchant shall comply with all internationally recognised requirements and all rules which apply according to national law or by reason of international Convention, relating to the carriage of Goods of a dangerous nature, and shall in any event inform the Carrier in writing of the exact nature of the danger before Goods of a dangerous nature are taken into charge by the Carrier and indicate to it, if need be, the precautions to be taken.
- (2) Goods of a dangerous nature which the Carrier did not know were dangerous, may, at any time or place, be unloaded, destroyed, or rendered harmless, without compensation. The Merchant shall be liable for all expenses, loss or damage arising out of their handing over for carriage or of their carriage.
- (3) If any Goods shipped with the knowledge of the Carrier as to their dangerous nature shall become a danger to any person or property, they may in a like manner be landed at any place or destroyed or rendered innocuous by the Carrier without liability on the part of the Carrier except to General Average.
- (4) Any hazardous cargo to be clearly marked with an asterisk on page two overleaf.

20. **Freight and Charges**

- (1) The freight payable hereunder has been calculated and based on particulars of the Goods furnished by or on behalf of the Merchant. The Carrier shall be entitled at any time to reweigh, remeasure or revalue the Goods and for this purpose to open and remove and examine the contents of any Container(s) and if the particulars furnished are found to be incorrect, the freight shall be adjusted accordingly with a surcharge of 30% of the adjusted freight and the Merchant shall also pay any expenses incurred by the Carrier in checking the said particulars.
- (2) Freight shall be deemed completely earned on receipt of the Goods by the Carrier and shall not be returnable in any event. Goods and/or Vessel lost or not lost and shall be paid by the Merchant immediately without any set-off, counter-claim or deduction or stay of execution but at latest before delivery of the cargo.
- (3) Charges and/or expenses and/or claims, fines, penalties, damages, costs and other amounts which may be incurred or imposed upon Carrier by reason of any breach by Merchant of any of the terms and provisions of this Bill of Lading or of any statutory or regulatory requirement or to be paid by the Merchant as agreed and/or under the conditions of this Bill of Lading and/or under the statutory law are payable on demand shall be considered definitely payable in like manner as soon as the charges/expenses have been incurred.
- (4) Merchants shall be jointly and severally liable to Carrier for freight, charges, expenses, demurrage, detention, advances and any and all costs and shall be liable to the Carrier for the cost and expenses of recovering such sums. The Carrier shall also have a lien against the Merchant on the Goods and any document relating thereto for all sums due from him to the Carrier in connection with any other shipment of the Merchant. The Carrier may exercise its lien at any time and place in its sole discretion and may dispose of or sell the Goods privately or by public auction without notice to the Merchant.

21. **Lien**

The Carrier shall have a lien on the Goods and any documents relating thereto which shall survive delivery of the Goods for any sums whatsoever payable by or chargeable to or for the account of the Merchant under this Bill of Lading and any contract preliminary hereto and for general average contributions to whomsoever due and for the cost and expenses of recovering such sums. The Carrier shall also have a lien against the Merchant on the Goods and any document relating thereto for all sums due from him to the Carrier in connection with any other shipment of the Merchant. The Carrier may exercise its lien at any time and place in its sole discretion and may dispose of or sell the Goods privately or by public auction without notice to the Merchant.

22. **General Average**

- (1) General Average shall be adjusted at any port or place at the Carrier's option, and to be settled according to the York-Antwerp Rules 1994, this covering all Goods whether carried on or under deck. The New Jason Clause, as approved by BIMCO, to be considered as incorporated herein.
- (2) Security including a cash deposit as the Carrier may deem sufficient to cover the estimated contribution of the Goods and any salvage and special charges thereon, shall, if required, be submitted to the Carrier prior to delivery of the Goods.

23. **Both-to-Blame Collision Clause**

The Both-to-Blame Collision Clause as adopted by BIMCO shall be considered incorporated herein.

24. **U.S. Trade**

- (1) In case the contract evidenced by this Bill of Lading is subject to the Carriage of Goods by Sea Act of the United States of America, 1936 (U.S. COGSA), then the provisions stated in the said Act shall govern before loading and after discharge and throughout the entire time the Goods are in the Carrier's custody.
- (2) If the U.S. COGSA applies, and unless the nature and value of the Goods have been declared by the shipper before the Goods have been handed over to the Carrier and inserted in this Bill of Lading, the Carrier shall in no event be or become liable for any loss of or damage to the Goods in an amount exceeding USD 500 per package or customary freight unit.
- (3) The Southern District Court of New York to have sole jurisdiction in cases that are litigated for cargo shipped to or from the United States of America.

24. **Non-Waiver and Severability**

Nothing in this Bill of Lading shall operate to deprive the Carrier of any statutory protection or defence, immunity, exemption, limitation of or exoneration from liability contained in applicable laws. The Terms and Conditions of this Bill of Lading (including all the terms and conditions of the Carrier's applicable tariff incorporated herein by virtue of Clause 3 above) shall be separable, and if any part or term hereof shall be held invalid, this shall not affect the validity or enforceability of any other part or term hereof.

FEY Elektronik GmbH

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Germany

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Issue date : 2025-01-20

Information Sheet for Batteries

According to REACH regulation EC 1907/2006, Art. 3, Point 3 and to OSHA regulation 29 CFR 1910.1200, batteries are ARTICLES with no intended release. As such they are not covered by REACH regulation Art. 31, Paragraph (1) to generate and supply an SDS or and MSDS.

This Battery Information Sheet is provided as an informational document for the purpose of assisting our customers.

1. Product and Company Identification**1.1 Product Identification**

Product name: Li-ion battery pack (or, Li-ion secondary/rechargeable battery)

Model: All Lithium Ion rechargeable batteries, consisting of cylindrical or prismatic single cells or multi cell battery packs. Battery packs provided with shrink tube enclosure or hardcase housing.

1.2 Usage

All information and instructions concerning usage, handling and maintenance provided in the documentation must be followed.

1.3 Manufacturer's name/ Representative

FEY Elektronik GmbH -> see above

1.4 Emergency No

Phone: +49(0) 160-440-2542

2. Composition/Information of ingredients**2.1 Chemical characteristics**

The Li-ion rechargeable battery pack is mounted inside a plastic enclosure or shrink tube. It consists of rechargeable Li-ion batteries and electronic components mounted on FR4 material PWB.

2.2 Dangerous ingredients

Ingredients : Lithium-Ion battery

CAS Number : Not specified

Composition & Information on Ingredients		
Component : Lithium Ion rechargeable battery cell		
Part	Material name	Concentration Range (wt %)
Positive Electrode	Lithium transition metal Oxide (Li[M] _m [O] _n)* ²	20 ~ 60
Positive Electrodes base	Aluminum	1 ~ 10
Negative Electrode	Carbon	10 ~ 30
Negative Electrode's base	Copper	1 ~ 15
Electrolyte	Organic electrolyte principally involves ester carbonate	5 ~ 25
Outer Case	Aluminum, iron, aluminum laminated plastic	1 ~ 30
Component : Battery pack Enclosure, Wiring, Connector		
Part	Material name	Concentration Range (wt %)
Shrink Tube	PVC, PET* ¹	< 2 of battery
Housing of battery pack	Polyamide* ¹ , Polycarbonate* ¹ , ABS* ¹ or a blend of these	0 to 20 (wt %)
Glue or potting	Silicone* ¹ , MS Polymer* ¹ , Epoxy 2k resin* ¹	> 2 (wt %)

*1 Not all products contains these materials.

*2 The letter M means transition metal and candidates of M are Co, Mn, Ni and Al. One compound includes one or more of these metals and one product includes one or more of the compounds.
The letter m and n means the number of atoms.

3. **Hazard identification (Most important hazards)**

Lithium transition metal Oxide

H302 Harmful if swallowed

H317 May cause sensitisation by skin contact

LiPF₆

H261 In contact with water releases flammable gas

H312 Harmful in contact with skin

H302 Harmful if swallowed.

H318 Risk of serious damage to eyes.

EUH014 Reacts violently with water.

Electrolyte

H302 Harmful if swallowed

H225 Highly flammable liquid and vapour

H312 Harmful in contact with skin

H314 Causes severe skin burns and eye damage

H317 May cause sensitization by skin contact

Signs : Harmful



Health Hazard



Corrosive



Flammable



H-Phrases:

H225	Highly flammable liquid and vapour.
EUH014	Reacts violently with water.
H261	In contact with water releases flammable gas.
H312	Harmful in contact with skin.
H301	Harmful if swallowed.
H318	Causes serious eye damage.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.

P-Statements:

P402	Store in a dry place.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fumes/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P305	IF IN EYES:
+P351	Rinse cautiously with water for several minutes.
+P338	Remove contact lenses if present and easy to do. Continue rinsing.
+P313	Get medical advice/attention.
P280	Wear suitable protective clothing
P314	Get Medical advice/attention if you feel unwell.
P273	Avoid release to environment.

4. First aid measures

Spilled internal battery materials

4.1 Inhalation:

Move victim to fresh air. – If necessary, restore normal breathing through standard first aid measures. Always seek medical attention.

4.2 Skin:

Remove contaminated clothing. Flush skin immediately with plenty of soap and water. If symptoms develop seek medical attention.

4.3 Eye:

Flush eyes with plenty of water for a minimum of 15 minutes occasionally lifting the upper and lower eyelids. Cleaning the eyes without rinsing with water can cause additional eye damage. Always seek medical attention.

4.4 Ingestion:

Do not induce vomiting. If conscious, wash mouth out with water using several glasses of water. Never give anything by mouth to an unconscious person.

Further treatment: All cases of eye contamination, persistent skin irritation and casualties who have swallowed this substance or been affected by breathing its vapours should be seen by a Doctor.

5. Fire-Fighting Measures

5.1 Extinguishing Media:

Carbon dioxide (CO²) and large volumes of water for cooling.

5.2 Special exposure hazards and unsuitable extinguishing methods:

Chemical fumes will be released during fire.

Do not use fire extinguishing blankets, sand or graphite powder to extinguish fire.

6. Accidental Release Measures

6.1 Personal Precautions

In case fumes are released, evacuate the affected area. When entering an area where fumes have been released, wear appropriate personal protective equipment and respiration protection. In case the electrolyte comes in contact with skin, flush skin immediately with plenty of water.

6.2 Environmental Precautions

Do not allow contamination of sewage, soil, groundwater, drainage system or bodies of water by electrolyte or other accidental released material.

6.3 Method's for cleaning up

Bind released electrolyte with sand. Put the damaged battery and the contaminated sand into a plastic bag. Dispose of this material in accordance with local laws and regulations.

7. **Handling and Storage**

7.1 Handling

Restrictions for safe handling:

Do not puncture or break the battery pack. Never short circuit the battery contacts. Do not touch the battery contacts with conductive material (for example metals). Do not expose the battery to heat or direct sunlight. Do not expose the battery to water or a high humidity environment. Do not incinerate the battery. Do not use the battery beyond its lifetime. Do not use the battery if it was exposed to a deep discharge or any other unexpected behaviour. Handle the batteries one by one, store and transport the batteries by themselves; do not expose them to other batteries.

7.2 Storage

Store batteries in cool, dry environment (optimal conditions are above 5°C and below 30°C). Store in a dust free environment, away from ignition sources and strong oxidizers. Keep away from heat sources or open flames. Do not store the battery near any kind of food. Store only in ventilated areas. Continuous storage at temperatures above 70°C may cause leakage and electrolyte release from the battery.

Short circuit may cause fire; release of electrolyte or leakage of the battery can cause personal harm. Store the batteries in the original packing only and ensure batteries are not jumbled. Strictly follow all recommendations in the manual especially those for usage, max. charge / discharge currents, max. charge voltage and min. and max. usage temperatures.

Applying mechanical force may lead to deformation and damage of the battery. There is the risk of fire and serious damage to eyes, skin, and lungs.

8. **Exposure Controls/Personal Protection**

8.1 Exposure limit values

Lithium transition metal Oxide	: 0,1mg/m ³
Elektrolyte	: N/A
LiPF ₆	: N/A

8.2 Personal protective Equipment (PPE)

Respiratory

Approved respirators should be used when fire or electrolyte leakage occur

Hand Protection

Wear gloves in case of electrolyte leakage

Eye Protection

Wear protective glasses when handling this product

Skin and Body Protection

Wear clothing that totally covers the skin and body in case of electrolyte leakage of the battery.



9. **Physical and Chemical Properties**

Appearance : Plastic housing or shrink tube enclosure
Colour : multiple
Odor : odorless
PH-value : not applicable
Boiling point : not applicable
Flashpoint point : not applicable

10. **Stability and Reactivity**

Stability:

The product is stable under the conditions named in point 7.

Conditions to avoid:

Heating above 70°C, damage, mechanical deformation, shock, pressure, penetration, disassembly, short circuit, high humidity, rain or salt water.

Hazardous decomposition products:

carbon monoxide CO
carbon dioxide CO²

11. **Toxicological Information**

Acute toxicity : Oral (rat) LD50 > 2g/kg (estimated)
Inhalation : Lung irritation
Others : Eye and skin irritation

In the event of exposure, skin irritation, asthma, allergic reaction, respiratory disorders and lung injury may occur.

12. **Ecological Data**

Ecotoxicity:

None expected with recommended use and disposal

Bioaccumulation:

None expected with recommended use and disposal

Other ecological impacts:

None expected with recommended use and disposal

13. **Disposal Considerations**

The battery has to be electrically isolated before disposal. Disposal must be done following local regulations.

14. **Transport Information**

Always use a label outside of the package, showing that the content is a Lithium battery. When transporting a large quantity of Li-Ion batteries, avoid high temperatures or high humidity, even for short periods of time.

The packing material must prevent damage, short circuit or displacement of the battery packs even if the batteries are dropped from a height of 1.2m on each corner/orientation of the package.

UN transportation regulation :	UN 3480
Shipping name :	Lithium Ion batteries (PI 965)
UN-Class :	Class 9
SP188 :	May be used if energy content of the battery is < 100Wh and single cell energy content is < 20Wh, the batteries are tested according UN38.3, the test summary report for the battery is in access of the shipper and the batteries are appropriate packed and wear appropriate labeling according to the kind of transportation(IATA, IMDG, IACO, ADR,...)

When contained in or shipped with Equipment

UN Transport Regulation :	UN 3481
Shipping name :	Lithium ion batteries packed with equipment (PI 966)
or Shipping name :	Lithium ion batteries contained in equipment (PI 967)
UN-Class :	Class 9
SP188 :	May be used if energy content of the battery is < 100Wh and single cell energy content is < 20Wh, the batteries are tested according UN38.3, the test summary report for the battery is in access of the shipper and the batteries are appropriate packed and wear appropriate labeling according to the kind of transportation(IATA, IMDG, IACO, ADR,...)

Other and additional restrictions may apply (for example, maximum container weight, number of batteries, max Li-equivalent on pallets and special shipment papers) depending on the shipment type (IATA, ICAO, ADR, IMDG...) Special approved packing might be needed. It is the shipper's responsibility to ensure the most current and valid regulations and transportation restrictions are used for the shipment.

15. Regulatory Information

- IATA Dangerous goods Regulations Edition 66 2025 (IATA DGR)
- IMDG-Code (International Maritime Dangerous Goods Code) 2025 Edition
- UN Model Recommendations for the Transport of Dangerous Goods, Model Regulations
- UN Manual of Tests and Criteria Part 38.3
- Battery REGULATION (EU) 2023/1542
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

16. Further Information

The data and information presented herein is based on the knowledge and experience available to us at this time and is intended to describe our product with respect to possible occupational health and safety concerns. We do not take any responsibility for wrong or missing information. All information is relevant just to our product and may be incomplete when our product is used in conjunction with other products. The user of this product has sole responsibility for determining the suitability of the product for any use and manner of use intended, and the regulations applicable to such use in relevant jurisdiction.

This PSDS is updated on a periodic basic in accordance with applicable health and safety standards.

Fey Elektronik GmbH does not take any responsibility for damages, loses of any kind, either direct or indirect, neither they occur causal or occasionally out of the usage of the herein given information.

Glossary:

ABS: Acrylonitrile Butadienestyrene Copolymer

PVC: Poly Vinyl Chloride

PET: Polyethylene terephthalate

UN38.3 Test Summary Report

Lithium cell or battery test summary in accordance with section 2.9.4 UN Model Regulations and sub-section 38.3 of Manual of Tests and Criteria, Part III, subsection 38.3.5

[a] ☐ Cell ☒ Battery ☐ Produkt
☒ **Tested Type Part #:**
PA-L2125.D
☒ **Same Type Part #:** as listed below

[d] Unique report ID:
UN.PB.PA-L2125.D, UN38.3, Rev.6
[e] Date of test report:
2017-05-22

[b] **Manufacturer**
Fey Elektronik GmbH
Storchenweg 3
21217 Seevetal
Germany
T. +49 40 703 8888-0
info@feyelektronik.de
www.feyelektronik.de

[c] **Test Laboratory**
Fey Elektronik GmbH
Storchenweg 3
21217 Seevetal
Germany
T. +49 40 703 8888-0
info@feyelektronik.de
www.feyelektronik.de

☒ Same Type Part Numbers # (all): PA-L2125.R007

[f] (i) ☒ Lithium-ion ☐ Lithium-metal ☐ Cell ☒ Battery
[f] (ii) Mass: approx. 136 g
[f] (iii) ☒ Watt-hour rating: 24 Wh or ☐ Lithium content: g
Note: The watt-hours of the same part numbers may vary by +/- 20 percent from the above value according to UN38.3.2.2 (b).
[f] (v) Model number(s): PA-L2125.D Customer Part No.: 8325810
[f] (iv) Physical description: Hardcase-Pack with two cells in a parallel configuration and protective device.
Nominal Voltage: 3.6V, Nominal Capacity: 6.5Ah typical
Used and UN38.3-tested cell type: Panasonic, NCR-18650BF

Our batteries/products are manufactured according to a Quality-Management-System.
For further information visit our website.

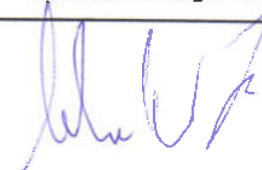
[g] List of Tests Conducted	Result (Pass / Fail / N.A.)	Remark
38.3.4.1 Test T.1: Altitude simulation	Pass	
38.3.4.2 Test T.2: Thermal test	Pass	
38.3.4.3 Test T.3: Vibration	Pass	
38.3.4.4 Test T.4: Shock	Pass	
38.3.4.5 Test T.5: External short circuit	Pass	
38.3.4.6 Test T.6: Impact/Crush	N.A.	for cell testing only
38.3.4.7 Test T.7: Overcharge	Pass	n.a. for primary cells or batteries
38.3.4.8 Test T.8: Forced discharge	N.A.	for cell testing only
[h] Battery assembly: ☒ Not Applicable. ☐ UN38.3.3 (f) ☐ UN38.3.3 (g)		
[i] Test Reference: UN Manual of Tests and Criteria, Part III, sub-section 38.3, ST/SG/AC.10/11/Rev.6		

Important! The stated signatory affirms, that this document is a true and correct summary of the original individual tests and test data. The original test data is confidential information available to competent State Authorities with valid identification and only upon their formal request. Disclosure of the original test data to any other entity upon its request will be considered by Fey Elektronik and, should Fey Elektronik consider this request is with merit, may be subject to the prior execution of a nondisclosure agreement.



[j] Signatory Date: 2019-11-07
Name: Michael Witte
Title: General Manager

Signature:



Fey Elektronik GmbH, Storchenweg 3, 21217 Seevetal, Germany
Tel.: +49 40 703 8888-0
www.feyelektronik.de

Technical Notice

Lithium Battery Information Sheet (BIS)

1. Identification

- 1.1 Product Name: Tadiran High Energy Lithium Battery, or
Sonnenschein Lithium Inorganic Lithium Battery
- Voltage: 3.6 Volts
- Chemistry System: Lithium Thionyl chloride
- Anode: Lithium metal
- Cathode: Liquid, Thionyl chloride-based
- 1.2 Company: Tadiran Batteries GmbH
- Address: Industriestr. 22
63654 BÜDINGEN
Germany
Tel.: +49(0)6042-954-0
Fax: +49(0)6042-954-190
Web: <https://tadiranbatteries.de>
- 1.3 Emergency Telephone Number: +49(0)6042/954-599

Note: This information sheet refers to cells and batteries assembled from them.

2. Hazards Identification

Warning: Fire, explosion, and severe, burn hazard. Do not recharge, disassemble, heat above 100 °C (series SL-500: 150 °C), incinerate, or expose contents to water.

Protection from charging:

Whenever lithium batteries are not the single power source in a circuit the following measures recommended by Underwriters Laboratories are relevant. The cells should not be connected in series with an electrical power source that would increase the forward current through the cells.

The circuit for these cells shall include one of the following:

- A. Two suitable diodes or the equivalent in series with the cells to prevent any reverse (charging) current. The second diode is used to provide protection in the event that one should fail. Quality control, or equivalent procedures, shall be established by the device manufacturer to ensure the diode polarity is correct for each unit,

or

- B. A blocking diode or the equivalent to prevent any reverse (charging) current and a resistor to limit current in case of a diode failure. The resistor should be sized to limit the reverse charging) current to the maximums given in the data sheets.

3. Composition/Information on Ingredients

Substance	CAS No.	Content w/w %	1. GHS Code	2. Signal word	3. H-Phrases
Lithium Metal	7439-93-2	2 - 6	GHS02, GHS05	Danger	260, 314, EUH014
Thionyl Chloride	7719-09-7	18 - 47	GHS05, GHS06	Danger	302, 331, 314, 335, EUH014
Aluminum Chloride	7446-70-0	2 - 5	GHS05	Danger	314, 318, EUH014
Lithium Chloride	7447-41-8	1 - 2	GHS07	Warning	302, 315, 319
Carbon	7440-44-0	2 - 5	--		
Steel, Nickel plated	--	35 - 73	--		
Glass	--	0 - 2	--		
Organic polymers	Different	0 - 2	--		

GHS-Code: GHS02 Flame
 GHS05 Corrosion
 GHS06 Skull and crossbones
 GHS07 Exclamation mark

H-Phrases: 260 In contact with water releases flammable gases which may ignite spontaneously
 302 Harmful if swallowed
 314 Causes severe skin burns and eye damage
 315 Causes skin irritation
 318 Causes serious eye damage
 319 Causes serious eye irritation
 331 Toxic if inhaled
 335 May cause respiratory irritation
 EUH014 Reacts violently with water

Important Note: The material in this section may only represent a hazard if the integrity of the battery is compromised, or if the battery is physically or electrically abused.

4. First Aid Measures

A. Electrolyte Contact

- Skin Immediately flush with plenty of water for at least 15 minutes. If symptoms are present after flushing, get medical attention.
- Eyes Immediately flush with plenty of water for at least 15 minutes and get medical attention.
- Respiratory system: With large quantities and irritation of the respiratory tract medical surveillance for 48 hours.
Immediately inhale Cortisone Spray, e.g. "Sanasthmax".

B. Lithium Metal Contact

- Skin Remove particles of lithium from skin as rapidly as possible. Immediately flush with plenty of water for at least 15 minutes and get medical attention.
- Eyes Immediately flush with plenty of water for at least 15 minutes and get immediate medical attention.

5. Fire - fighting measures

A. Extinguishing Media

- During a fire with lithium batteries, copious amounts of cold water are an effective medium to prevent expansion of the fire. Do not use warm water or hot water.
- Lith-X (Class D extinguishing media) is effective on fires involving only a few lithium batteries.
- Do not use CO₂ or Halon type extinguishers.
- Dry chemical type extinguishers have limited extinguishing potential.

B. Fire Fighting Procedures

- Use a positive pressure self-contained breathing apparatus if batteries are involved in a fire.
- Full protective clothing is necessary.
- During water application caution is advised as burning pieces of lithium may be ejected from the fire.
- Where the cells or batteries are not at the center of the fire copious amounts of water may be supplied to the cells using a diffuser type nozzle so that the cells remain cool during the containment and extinguishing of the fire. A sprinkler system should be sufficient for this purpose the critical factor being that the lithium cells do not experience temperatures above the melting point of lithium.
- Small amounts of water should never be used such as the volumes contained within portable fire extinguishers. Standard dry powder extinguishers are ineffective. Halon extinguishers must not be used when fighting lithium fires as toxic gases may be generated during firefighting. It should be noted that a hazard of hydrogen formation exists whenever hot lithium metal comes into contact with water.

6. Accidental release measures

When the battery housing is damaged, small amounts of electrolyte may leak. Seal battery airtight in a plastic bag, adding some chalk (CaCO_3) or lime (CaO) powder or Vermiculite. Electrolyte traces may be wiped off dryly using household paper. Rinse with water afterwards.

7. Handling and Storage

- Do not allow terminals to short-circuit.
- Storage preferably in a cool (below 21 °C), dry area that is subject to little temperature change.
- Do not place near heating equipment, nor expose to direct sunlight for long periods. Elevated temperatures can result in reduced battery service life.

8. Exposure controls / personal protection

Lithium batteries are products, from which no substance is released under normal and reasonably foreseeable conditions of use.

9. Physical and chemical properties

1.1.1.1.1 Refer to information under item 3.

10. Stability and reactivity

May rupture violently when heated above 150 °C or when charged.

11. Toxicological information

Not applicable

Refer to information under item 3.

12. Ecological information

The batteries do not contain mercury, cadmium or other heavy metals.

13. Disposal Considerations

- Batteries do not contain hazardous materials according to EC directives 91/157/EEC, 93/86/EEC, and 2011/65/EU (RoHS directive)
- EC battery directive 2006/66/EC has been implemented by most EC member states.
- According to the EU Battery Directive, Batteries are marked with the symbol of the crossed-out wheeled bin (see figure). The symbol reminds the end user that batteries are not permitted to be disposed of with household waste but must be collected separately.
- Waste Batteries must effectively be protected against short circuit during storage and transport.
- A disposal service is offered upon request by Tadiran Batteries.
- For additional information, a Technical Notice is available upon request

14. Transport information

Class 9

UN 3090: LITHIUM METAL BATTERIES

If contained in equipment:

UN 3091: LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, or
LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

Packing group: see packing instructions. Usually II

Special provisions and packing instructions:

ADR, RID:	SP188, SP230, SP310, SP360, SP376, SP377, SP387, SP390, SP636, SP670, P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
IATA:	A48, A88, A99, A154, A164, A181, A182, A183, A185, A201, A206, A213, A334, A802, P968, P969, P970
IMDG Code:	SP188, SP230, SP310, SP360, SP376, SP377, SP384, P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906

For more information see

<https://tadiranbatteries.de> > Download repository > Transport & Safety

15. Regulatory information

Transport Regulations: see in section 14

EU Battery Directive: see in section 13

16. Other information

- Tadiran Lithium Batteries are registered by Underwriters Laboratories, Northbrook, U.S.A. under file MH 12827.
- Further information is given in
 - Tadiran Lithium Battery Product Data Catalogue
 - Tadiran Lithium Battery Technical Brochure.
- For lithium batteries in general, Safety standard IEC 60086-4 applies. It contains detailed recommendations for manufacturers of equipment and users.
- Battery packs

The design and assembly of battery packs require special skills, expertise and experience. Therefore, it is not recommended that the end user attempt to self-assemble battery packs. It is preferable that any battery using lithium cells be fabricated by TADIRAN to ensure proper battery design and construction. A full battery assembly service is available from TADIRAN who can be contacted for further information. If for any reason, this is not possible, TADIRAN can review the pack design in confidence to ensure that the design is safe (in assembly and use) and capable of meeting stated performance requirements.

The REACH regulation (1907/2006/EC) has replaced the EU directive for safety data sheets (91/155/EU). Both the now valid REACH regulation and the no longer valid directive require safety data sheets to be created and updated for materials and preparations. For products - including lithium batteries - no EU safety data sheets are required according to European chemicals regulations.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.



UN38.3 Test Summary Report

Lithium cell or battery test summary in accordance with section 2.9.4 UN Model Regulations and sub-section 38.3 of Manual of Tests and Criteria, Part III, subsection 38.3.5

- [a] ☒ Cell ☐ Battery ☐ Produkt
☒ **Tested Type Part #:**
 SL-760
☒ **Same Type Part #:** as listed below

- [d] Unique report ID:
 15Q-605
 [e] Date of test report:
 2003-04-01

[b] **Manufacturer**

Fey Elektronik GmbH
 Storcheweg 3
 21217 Seevetal
 Germany
 T. +49 40 703 8888-0

info@feyelektronik.de
www.feyelektronik.de

[c] **Test Laboratory**

Tadiran Batteries Ltd.
 P.O. Box 1
 Kiryat Ekron
 Israel 70500
 T. +972 8 9 44 560

sales@tadiran-batt.com
www.tadiran.com

- ☒ Same Type Part Numbers # (all): PA-A3607.R004 (cell assembled with cable and connector)

- [f] (i) ☐ Lithium-ion ☒ Lithium-metal ☒ Cell ☐ Battery
 [f] (ii) Mass: approx. 20 g
 [f] (iii) ☐ Watt-hour rating: Wh or ☒ Lithium content: 0.65 g

- [f] (v) Model number(s): SL-760 Customer Part No.: 8326186
 [f] (iv) Physical description: Primary (non-rechargeable) 3.7 V Lithium Thionyl Chloride (Li-SOCl₂) battery, assembled from 1 (one) "AA" sized SL-760 cell. The SL-760 cell may come with optional suffixes consisting of a "/" followed by one or more letters and a digit. These suffixes indicate different types of finishing to the cell (for example S-Standard, T-Tab, P-Pin, etc.).
 Our batteries/products are manufactured according to a Quality-Management-System.
 For further information visit our website.

[g] List of Tests Conducted	Result (Pass / Fail / N.A.)	Remark
38.3.4.1 Test T.1: Altitude simulation	Pass	
38.3.4.2 Test T.2: Thermal test	Pass	
38.3.4.3 Test T.3: Vibration	Pass	
38.3.4.4 Test T.4: Shock	Pass	
38.3.4.5 Test T.5: External short circuit	Pass	
38.3.4.6 Test T.6: Impact/Crush	Pass	
38.3.4.7 Test T.7: Overcharge	N.A.	n.a. for primary cells or batteries
38.3.4.8 Test T.8: Forced discharge	Pass	

- [h] Battery assembly: ☒ Not Applicable. ☐ UN38.3.3 (f) ☐ UN38.3.3 (g)
 [i] Test Reference: UN Manual of Tests and Criteria, Part III, sub-section 38.3, ST/SG/AC.10/11/Rev.3.1

Important! The stated signatory affirms, that this document is a true and correct summary of the original individual tests and test data. The original test data is confidential information available to competent State Authorities with valid identification and only upon their formal request. Disclosure of the original test data to any other entity upon its request will be considered by Fey Elektronik and, should Fey Elektronik consider this request is with merit, may be subject to the prior execution of a nondisclosure agreement.



[j] Signatory Date: 2023-09-11
 Name: Michael Witte
 Title: General Manager

Signature:

Fey Elektronik GmbH, Storcheweg 3, 21217 Seevetal, Germany
 Tel.: +49 40 703 8888-0
www.feyelektronik.de

Technical Notice

Lithium Battery Information Sheet (BIS)

1. Identification

- 1.1 Product Name: Tadiran High Energy Lithium Battery, or
Sonnenschein Lithium Inorganic Lithium Battery
- Voltage: 3.6 Volts
- Chemistry System: Lithium Thionyl chloride
- Anode: Lithium metal
- Cathode: Liquid, Thionyl chloride-based
- 1.2 Company: Tadiran Batteries GmbH
- Address: Industriestr. 22
63654 BÜDINGEN
Germany
Tel.: +49(0)6042-954-0
Fax: +49(0)6042-954-190
Web: <https://tadiranbatteries.de>
- 1.3 Emergency Telephone Number: +49(0)6042/954-599

Note: This information sheet refers to cells and batteries assembled from them.

2. Hazards Identification

Warning: Fire, explosion, and severe, burn hazard. Do not recharge, disassemble, heat above 100 °C (series SL-500: 150 °C), incinerate, or expose contents to water.

Protection from charging:

Whenever lithium batteries are not the single power source in a circuit the following measures recommended by Underwriters Laboratories are relevant. The cells should not be connected in series with an electrical power source that would increase the forward current through the cells.

The circuit for these cells shall include one of the following:

- A. Two suitable diodes or the equivalent in series with the cells to prevent any reverse (charging) current. The second diode is used to provide protection in the event that one should fail. Quality control, or equivalent procedures, shall be established by the device manufacturer to ensure the diode polarity is correct for each unit,

or

- B. A blocking diode or the equivalent to prevent any reverse (charging) current and a resistor to limit current in case of a diode failure. The resistor should be sized to limit the reverse charging) current to the maximums given in the data sheets.

3. Composition/Information on Ingredients

Substance	CAS No.	Content w/w %	1. GHS Code	2. Signal word	3. H-Phrases
Lithium Metal	7439-93-2	2 - 6	GHS02, GHS05	Danger	260, 314, EUH014
Thionyl Chloride	7719-09-7	18 - 47	GHS05, GHS06	Danger	302, 331, 314, 335, EUH014
Aluminum Chloride	7446-70-0	2 - 5	GHS05	Danger	314, 318, EUH014
Lithium Chloride	7447-41-8	1 - 2	GHS07	Warning	302, 315, 319
Carbon	7440-44-0	2 - 5	--		
Steel, Nickel plated	--	35 - 73	--		
Glass	--	0 - 2	--		
Organic polymers	Different	0 - 2	--		

GHS-Code: GHS02 Flame
 GHS05 Corrosion
 GHS06 Skull and crossbones
 GHS07 Exclamation mark

H-Phrases: 260 In contact with water releases flammable gases which may ignite spontaneously
 302 Harmful if swallowed
 314 Causes severe skin burns and eye damage
 315 Causes skin irritation
 318 Causes serious eye damage
 319 Causes serious eye irritation
 331 Toxic if inhaled
 335 May cause respiratory irritation
 EUH014 Reacts violently with water

Important Note: The material in this section may only represent a hazard if the integrity of the battery is compromised, or if the battery is physically or electrically abused.

4. First Aid Measures

A. Electrolyte Contact

- Skin Immediately flush with plenty of water for at least 15 minutes. If symptoms are present after flushing, get medical attention.
- Eyes Immediately flush with plenty of water for at least 15 minutes and get medical attention.
- Respiratory system: With large quantities and irritation of the respiratory tract medical surveillance for 48 hours.
Immediately inhale Cortisone Spray, e.g. "Sanasthmax".

B. Lithium Metal Contact

- Skin Remove particles of lithium from skin as rapidly as possible. Immediately flush with plenty of water for at least 15 minutes and get medical attention.
- Eyes Immediately flush with plenty of water for at least 15 minutes and get immediate medical attention.

5. Fire - fighting measures

A. Extinguishing Media

- During a fire with lithium batteries, copious amounts of cold water are an effective medium to prevent expansion of the fire. Do not use warm water or hot water.
- Lith-X (Class D extinguishing media) is effective on fires involving only a few lithium batteries.
- Do not use CO₂ or Halon type extinguishers.
- Dry chemical type extinguishers have limited extinguishing potential.

B. Fire Fighting Procedures

- Use a positive pressure self-contained breathing apparatus if batteries are involved in a fire.
- Full protective clothing is necessary.
- During water application caution is advised as burning pieces of lithium may be ejected from the fire.
- Where the cells or batteries are not at the center of the fire copious amounts of water may be supplied to the cells using a diffuser type nozzle so that the cells remain cool during the containment and extinguishing of the fire. A sprinkler system should be sufficient for this purpose the critical factor being that the lithium cells do not experience temperatures above the melting point of lithium.
- Small amounts of water should never be used such as the volumes contained within portable fire extinguishers. Standard dry powder extinguishers are ineffective. Halon extinguishers must not be used when fighting lithium fires as toxic gases may be generated during firefighting. It should be noted that a hazard of hydrogen formation exists whenever hot lithium metal comes into contact with water.

6. Accidental release measures

When the battery housing is damaged, small amounts of electrolyte may leak. Seal battery airtight in a plastic bag, adding some chalk (CaCO_3) or lime (CaO) powder or Vermiculite. Electrolyte traces may be wiped off dryly using household paper. Rinse with water afterwards.

7. Handling and Storage

- Do not allow terminals to short-circuit.
- Storage preferably in a cool (below 21 °C), dry area that is subject to little temperature change.
- Do not place near heating equipment, nor expose to direct sunlight for long periods. Elevated temperatures can result in reduced battery service life.

8. Exposure controls / personal protection

Lithium batteries are products, from which no substance is released under normal and reasonably foreseeable conditions of use.

9. Physical and chemical properties

1.1.1.1.1 Refer to information under item 3.

10. Stability and reactivity

May rupture violently when heated above 150 °C or when charged.

11. Toxicological information

Not applicable

Refer to information under item 3.

12. Ecological information

The batteries do not contain mercury, cadmium or other heavy metals.

13. Disposal Considerations

- Batteries do not contain hazardous materials according to EC directives 91/157/EEC, 93/86/EEC, and 2011/65/EU (RoHS directive)
- EC battery directive 2006/66/EC has been implemented by most EC member states.
- According to the EU Battery Directive, Batteries are marked with the symbol of the crossed-out wheeled bin (see figure). The symbol reminds the end user that batteries are not permitted to be disposed of with household waste but must be collected separately.
- Waste Batteries must effectively be protected against short circuit during storage and transport.
- A disposal service is offered upon request by Tadiran Batteries.
- For additional information, a Technical Notice is available upon request

14. Transport information

Class 9

UN 3090: LITHIUM METAL BATTERIES

If contained in equipment:

UN 3091: LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, or
LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

Packing group: see packing instructions. Usually II

Special provisions and packing instructions:

ADR, RID:	SP188, SP230, SP310, SP360, SP376, SP377, SP387, SP390, SP636, SP670, P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
IATA:	A48, A88, A99, A154, A164, A181, A182, A183, A185, A201, A206, A213, A334, A802, P968, P969, P970
IMDG Code:	SP188, SP230, SP310, SP360, SP376, SP377, SP384, P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906

For more information see

<https://tadiranbatteries.de> > Download repository > Transport & Safety

15. Regulatory information

Transport Regulations: see in section 14

EU Battery Directive: see in section 13

16. Other information

- Tadiran Lithium Batteries are registered by Underwriters Laboratories, Northbrook, U.S.A. under file MH 12827.
- Further information is given in
 - Tadiran Lithium Battery Product Data Catalogue
 - Tadiran Lithium Battery Technical Brochure.
- For lithium batteries in general, Safety standard IEC 60086-4 applies. It contains detailed recommendations for manufacturers of equipment and users.
- Battery packs

The design and assembly of battery packs require special skills, expertise and experience. Therefore, it is not recommended that the end user attempt to self-assemble battery packs. It is preferable that any battery using lithium cells be fabricated by TADIRAN to ensure proper battery design and construction. A full battery assembly service is available from TADIRAN who can be contacted for further information. If for any reason, this is not possible, TADIRAN can review the pack design in confidence to ensure that the design is safe (in assembly and use) and capable of meeting stated performance requirements.

The REACH regulation (1907/2006/EC) has replaced the EU directive for safety data sheets (91/155/EU). Both the now valid REACH regulation and the no longer valid directive require safety data sheets to be created and updated for materials and preparations. For products - including lithium batteries - no EU safety data sheets are required according to European chemicals regulations.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.



UN38.3 Test Summary Report

Lithium cell or battery test summary in accordance with section 2.9.4 UN Model Regulations and sub-section 38.3 of Manual of Tests and Criteria, Part III, subsection 38.3.5

- [a] ☒ Cell ☐ Battery ☐ Produkt
☒ **Tested Type Part #:**
 SL-760
☒ **Same Type Part #:** as listed below

- [d] Unique report ID:
 15Q-605
 [e] Date of test report:
 2003-04-01

[b] **Manufacturer**
 Fey Elektronik GmbH
 Storcheweg 3
 21217 Seevetal
 Germany
 T. +49 40 703 8888-0
info@feyelektronik.de
www.feyelektronik.de

[c] **Test Laboratory**
 Tadiran Batteries Ltd.
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sales@tadiran-batt.com
www.tadiran.com

- ☒ Same Type Part Numbers # (all): PA-A3607.R004 (cell assembled with cable and connector)

- [f] (i) ☐ Lithium-ion ☒ Lithium-metal ☒ Cell ☐ Battery
 [f] (ii) Mass: approx. 20 g
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 [f] (v) Model number(s): SL-760 Customer Part No.: 8326186
 [f] (iv) Physical description: Primary (non-rechargeable) 3.7 V Lithium Thionyl Chloride (Li-SOCl₂) battery, assembled from 1 (one) "AA" sized SL-760 cell. The SL-760 cell may come with optional suffixes consisting of a "/" followed by one or more letters and a digit. These suffixes indicate different types of finishing to the cell (for example S-Standard, T-Tab, P-Pin, etc.).
 Our batteries/products are manufactured according to a Quality-Management-System.
 For further information visit our website.

[g] List of Tests Conducted	Result (Pass / Fail / N.A.)	Remark
38.3.4.1 Test T.1: Altitude simulation	Pass	
38.3.4.2 Test T.2: Thermal test	Pass	
38.3.4.3 Test T.3: Vibration	Pass	
38.3.4.4 Test T.4: Shock	Pass	
38.3.4.5 Test T.5: External short circuit	Pass	
38.3.4.6 Test T.6: Impact/Crush	Pass	
38.3.4.7 Test T.7: Overcharge	N.A.	n.a. for primary cells or batteries
38.3.4.8 Test T.8: Forced discharge	Pass	

- [h] Battery assembly: ☒ Not Applicable. ☐ UN38.3.3 (f) ☐ UN38.3.3 (g)
 [i] Test Reference: UN Manual of Tests and Criteria, Part III, sub-section 38.3, ST/SG/AC.10/11/Rev.3.1

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[j] Signatory Date: 2023-09-11
 Name: Michael Witte
 Title: General Manager

Signature:

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 Tel.: +49 40 703 8888-0
www.feyelektronik.de

This product is used in a hermetically sealed state. So, it is not an object of the SDS system. This document is provided to customers as reference information for the safe handling of the product. The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Panasonic Corporation makes no warranty expressed or implied.

PRODUCT SAFETY DATA SHEET

1 Chemical product and company identification

Name of Product : Nickel-Metal Hydride Battery
Name of Company : Panasonic Energy Co., Ltd.
Address : 1-1 Matsushita-cho, Moriguchi-city, Osaka, 570-8511, Japan
Emergency Contact : +81-80-9932-3190 (JST Working hours)
+81-6-6991-1141 (Holiday)

2 Hazards identification

GHS Classification : No applicable
Toxicity : When the leaked liquid adheres to the skin, it may cause the damage of the skin. When it is gotten in eye, it may cause the damage of eye such as losing sight.
Hazard : There is the risk of explosion if batteries are disposed in fire, heated above 100 degree C. Stacking or jumbling batteries may cause external short circuits, heat generation and explosion.

3 Composition/information of ingredients

Material	CAS RN	Content (%)
Nickel Hydroxide	12054-48-7	15-30
Cobalt Hydroxide	21041-93-0	
Hydrogen absorbing alloy	7440-02-0(Ni) 7440-48-4(Co) 7439-96-5(Mn) 7429-90-5(Al)	} 20-40
Nickel	7440-02-0	
Iron	7439-89-6	
Potassium Hydroxide	1310-58-3	
Sodium Hydroxide	1310-73-2	} 0-15
Lithium Hydroxide	1310-65-2	

4 First aid measures (in case of electrolyte leakage from the battery)

Eye contact by electrolyte : Do not rub eyes. Wash immediately with large amount of clean water such as tap water 15 minutes or more then receive the ophthalmologist's treatment promptly. It may cause such as losing sight when the right procedure is not taken.
Skin contact by electrolyte : Wash the affected area under tepid running water using a mild soap. If appropriate procedures are not taken, this may cause sores on the skin. Get medical attention if irritation develops or persists.

- Ingestion of electrolyte : Wash in the mouth immediately with large amount of clean water and make the sufferer drink a lot of water.
 Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.
- Inhalation of electrolyte fume : Remove to fresh air immediately. Take a medical treatment

5 Firefighting measures

Extinguishing Media

Dry sand, chemical powder fire extinguisher.

Specific Fire-Fighting Methods

Be sure on the windward to extinguish the fire, since vapor may make eyes, nose and throat irritate, Wear the respiratory protection equipment in some cases.

6 Accidental release measures (in case of electrolyte leakage from the battery)

Health Considerations and Protective Equipment

Wear proper protective equipment.

Environmental Precautions

Prevent spills form entering sewers, watercourses.

Spill Clean-Up Procedures

Collect material to minimize dust generation ; use wet mop, damp sponge. Place collected material into a suitable container for disposal.

7 Handling and storage

Handling

When packing the batteries, do not allow battery terminals to contact each other, or contact with other metals. Be sure to pack batteries by providing partitions in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together.

Use strong material for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during their transportation.

Do not short-circuit, deform, throw into fire or disassemble.

Use only dedicated charger or charge according to the conditions specified.

Do not mix different type of batteries.

Do not solder directly onto batteries.

Insert the battery correctly in electrical equipment.

Storage

Do not let water penetrate into packaging boxes during their storage and transportation.

Do not store the battery in places of the high temperature or under direct sunlight.

Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, rain or frozen condition

8. Exposure controls and personal protection

Acceptable concentration : Not specified about Nickel-Metal Hydride Battery.

Facilities : Nothing in particular.

Protective Equipment (in case of electrolyte leakage from the battery)

Respiratory Protection : For most condition no respiratory protection.

Hand Protection : Safety gloves.

Eye Protection : Safety glasses must be worn when handling this product.

Skin and Body Protection : To prevent any contact, wear impervious clothing such as boots or whole body suits as appropriate.

9. Physical and chemical properties

- Appearance : Nickel-Metal hydride battery is stored in the plastic resin case or tube.
- Nominal Voltage : The voltage value depends on the number of built-in batteries used in battery pack.

10. Stability and reactivity

Since batteries utilize a chemical reaction they are actually considered a chemical product.

As such, battery performance will deteriorate over time even if stored for a long period of time without being used. In addition, the various usage conditions such as discharge, ambient temperature, etc. are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage.

11. Toxicological information

Battery is not harmful as its ingredients are in a hermetically sealed state.

12. Ecological information

In case of the worn out battery was disposed in land, the battery case may be corroded, and leak electrolyte. However, there is no environmental impact information.

Mercury (Hg), Cadmium (Cd) and Lead (Pb) are not used in cell.

13. Disposal considerations

When the battery is worn out, dispose of it under the ordinance of each local government.

14. Transport information**Handling**

- During the transportation of a large amount of batteries by ship, trailer or railway, do not leave them in the places of high temperatures and do not allow them to be exposed to dew condensation.
- Avoid transportation with the possibility of the collapse of cargo piles and the packing damage.

Air Transport

Non-Dangerous Goods. For air transportation, the words "Not Restricted, as per Special Provision A199" must be included in the description of the substance on the Air Waybill, when an Air Waybill is issued.

Marine Transport

UN number: UN3496 see SP963

1. Nickel-metal hydride cells or batteries packed with or contained in equipment and nickel-metal hydride button cells are Non-Dangerous Goods.
2. All other nickel-metal hydride cells or batteries shall be securely packed and protected from short circuit. They are Non-Dangerous Goods provided they are loaded in a cargo transport unit in a total quantity of less than 100kg gross mass.
3. When loaded in cargo transport unit in a total quantity of 100kg gross mass or more, they are Dangerous Goods (Class 9)

15. Regulatory information

EU Battery Directive (2006/66/EC, 2013/56/EU)

EU Battery Regulation (Regulation (EU) 2023/1542 of the European Parliament and of the Council)

EU REACH Regulation (Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals)

Act on Preventing Environmental Pollution of Mercury (Japan)

16. Other information

This PSDS is provided to customers as reference information in order to handle batteries safely. It is necessary for the customer to take appropriate measures depending on the actual situation such as the individual handling, based on this information.

References

IATA Dangerous Goods Regulations Edition 66 (IATA DGR)

IMO International Maritime Dangerous Goods Code 2022 and 2024 Edition (IMDG Code)

Prepared by: Engineering Department
Energy Device Business Division
Panasonic Energy Co., Ltd.

Ref. No: AL MN-PSDS-V3-APS nv

Release date: 1 Apr, 2024

PRODUCT SAFETY DATA SHEET

This PSDS document refers to batteries as a consumer product. Under the Global Harmonized System the batteries are considered "articles" and are exempted from SDS classification criteria from and the GHS labelling. The following document is supplied as a feedback to requests concerning battery use, regulatory compliance and safety of use.

1. PRODUCTS AND COMPANY IDENTIFICATION

Product name: Alkaline Batteries Panasonic Powerline		
IEC Designation	Size	Voltage
LR6	AA	1,5
LR03	AAA	1,5
LR14	C	1,5
LR20	D	1,5
6LR61	9V	9

2. HAZARDS IDENTIFICATION

Most Important Hazardous

Adverse Human Health

Effects:

When the leaked liquid adheres to the skin, it may cause the damage of the skin. When it is gotten in eye, it may cause the damage of eye such as losing sight.

Physical And Chemical Hazard:

There is the risk of explosion if batteries are disposed in fire, heated above 100 degree C. Stacking or jumbling batteries may cause external short circuits, heat generation and explosion.

Specific Hazards:

Not Applicable.

Class Name Of Hazardous Chemicals:

Not Applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name: Alkaline Battery

COMPONENT	CONCENTRATION (Wt %)	FORMULA	CAS NO.
<Positive Electrode> Manganese dioxide Graphite	20–45 1.0–4.5	MnO ₂ C	1313-13-9 7782-42-5
<Negative Electrode> Zinc	10–20	Zn	7440-66-6
<Electrolyte> Potassium Hydroxide Water	3–10 1–15	KOH H ₂ O	1310-58-3

4. FIRST AID MEASURES (IF LEAKED SOLUTION WILL CONTACT)

Skin Contact:

Wash the affected area under tepid running water using a mild soap. If appropriate procedures are not taken, this may cause sores on the skin. Get medical attention if irritation develops or persists.

Eye Contact:

Do not rub eyes. Wash immediately with large amount of clean water such as tap water 15 minutes or more then receive the ophthalmologist's treatment promptly. It may cause such as losing sight when the right procedure is not taken.

Ingestion:

Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

5. FIRE FIGHTING MEASURES

Extinguishing Media:

Dry chemical, carbon dioxide, great deal of water.

Specific Fire-Fighting
Methods:

Be sure on the windward to extinguish the fire, since vapor from burning batteries may make eyes, nose and throat irritate. Wear the respiratory protection equipment in some cases.

6. ACCIDENTAL RELEASE MEASURES

(IN CASE OF ELECTROLYTE LEAKAGE FROM THE BATTERY)

Health Considerations and Protective Equipment:

Wear proper protective equipment.

Environmental Precautions:

Prevent spills from entering sewers, watercourses.

Spill Clean-Up Procedures:

Collect material to minimize dust generation; use wet mop, damp sponge. Place collected material into a suitable container for disposal.

7. HANDLING AND STORAGE

Handling

Technical Measures:

No exposure limits exist for the battery

Precaution:

When packing the batteries, do not allow battery terminals to contact each other, or contact with electrically conductive materials. Be sure to pack batteries by providing partitions in packaging boxes, or in separate plastic bags to avoid they are mixed together. Use strong material for packaging boxes to avoid damage by vibration, impact, dropping and stacking during transportation. Do not recharge batteries. Do not deform batteries. Do not mix different types of batteries. Do not solder directly onto batteries.

Storage

Storage Condition:

Do not let water penetrate into packaging boxes during their storage and transportation. Do not store the batteries in the high temperature exceeding 35 degree C, under direct sunlight or near heat source. Also avoid high humidity. Be sure not to expose the batteries to condensation, water drop or not to store them under frozen condition

Safe Packaging Materials:

Carton boxes, Wooden boxes

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (IN CASE OF ELECTROLYTE LEAKAGE FROM THE BATTERY)

Engineering Measures:	Make available in the work area and storage place emergency shower and eyes wash
Occupational Exposure Limits (OELs):	Not specified in ACGIH and OSHA
Protective Equipments	
Respiratory Protection:	For most condition no respiratory protection
Hand Protection:	Safety gloves.
Eye Protection:	Safety glasses with side shields must be worn when handling this product
Skin and Body Protection:	To prevent any contact, wear impervious clothing such as boots or whole body suits as appropriate

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Style Appearance:	Cylindrical shape
Colour:	Depend on the design
Odor:	Odourless~Characteristic odour
pH:	Not Applicable
Specific temperatures /Temperature range at which changes in physical state occur:	Not Applicable
Flash Point:	Not Applicable
Explosion Properties:	No Data
Specific Gravity (g/cm ³):	No Data
Solubility:	Not Applicable
Voltage:	1.5 Volts-9Volts

10. STABILITY AND REACTIVITY (PHYSICAL HAZARD)

<u>Stability:</u>	Stable under normal conditions
<u>When batteries are short-circuited:</u>	There is the possibility that stacking or jumbling batteries cause short circuits, heat generation, leakage or explosion
<u>When batteries are recharge:</u>	Risk of swelling leakage or explosion, contents may protrude
<u>When batteries are heated or disposed in fire:</u>	Risk of leakage or explosion
<u>When batteries are disassembled:</u>	Risk of short circuits. Electrolyte may cause skin itching
<u>Reactivity:</u>	Stable under normal conditions
<u>Hazardous Decomposition Products:</u>	No information

11. TOXICOLOGICAL INFORMATION

<u>Acute Toxicity:</u>	No information as a battery
<u>Local Effects:</u>	No information as a battery

In case of the worn out battery was disposed in land, the battery case may be corroded, and leak electrolyte. But, we have no ecological information.

Heavy metal quantity in a cell:

Hg	< 1 ppm	Reducing Vaporization Atomic Absorption Spectrometer
Cd	< 10 ppm	Inductively Coupled Plasma Atomic Emission Spectroscopy
Pb	< 10 ppm	Inductively Coupled Plasma Atomic Emission Spectroscopy

12. DISPOSAL CONSIDERATIONS

When the battery is worn out, dispose of it under the ordinance of each local government or the law issued by relating government

13. TRANSPORT INFORMATION

As alkaline battery is listed in Special Provision A123 of IATA Dangerous Goods Regulations when it is shipped by air, alkaline battery is not a regulation substance in the hazardous substance shipping regulations. In addition, this battery requires the following attentions

14. REGULATORY INFORMATIONS

- EU Battery Directive (2006/66/EC, version 2018) <http://data.europa.eu/eli/dir/2006/66/2018-07-04>
- Regulation (EC) No, 1907/2006 on the Registration, Evaluation, Authorization of Chemicals (REACH) (current version 1/5/2022) <http://data.europa.eu/eli/reg/2006/1907/2022-05-01>

15. OTHER INFORMATION

References:

- IATA Dangerous Goods Regulations 64th Edition (2023)
- IMO International Maritime Dangerous Goods 2020 Edition

VISION BATTERY

Sealed Lead Acid Battery



MATERIAL SAFETY DATA SHEET

SECTION 1 - GENERAL INFORMATION

MANUFACTURER'S NAME: SHENZHEN CENTER POWER TECH CO., LTD	EMERGENCY TELEPHONE NO.: 86-755-84318088
ADDRESS: CENTER POWER INDUSTRIAL PARK TONGFU INDUSTRIAL DISTRICT DAPENG TOWN CHINA	OTHER INFORMATION CALLS: 86-755-84318031
PERSON RESPONSIBLE FOR PREPARATION Shouzhong Yi, Safety, Health & Environmental Affairs Manager	Revised Date: JAN 03, 2023

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

C.A.S.	PRINCIPAL HAZARDOUS COMPONENT(S) (chemical & common name(s))	Hazard Category	% Weight	ACGIH TLV - mg/m ³	OSHA PEL/TWA - mg/m ³
7439-92-1	Lead/Lead Oxide (Litharge)/Lead Sulfate	Acute-Chronic	60-70	0.05 mg/m ³	0.05 mg/m ³
7440-70-2	Calcium (lead calcium alloy)	Reactive	<0.15	Not Established	Not Established
7440-31-5	Tin	Chronic	<1	2	2
7440-38-2	Arsenic (inorganic)	Acute-Chronic	<1	0.01	0.01
7664-93-9	Sulfuric Acid (Battery Electrolyte)	Reactive-Oxidizer Acute -Chronic	10-15	1.0	1.0
Not applicable	Inert Ingredients	Not applicable	<6	Not Applicable	Not Applicable

Note: PEL's for individual states may differ from OSHA's PEL's. Check with local authorities for the applicable state PEL's.

OSHA – Occupational Safety and Health Administration; ACGIH – American Conference of Governmental Industrial Hygienists; NIOSH – National Institute for Occupational Safety and Health.

COMMON NAME: (Used on label) Sealed Lead-acid Battery

(Trade Name & Synonyms) lead acid: CP, CGA, CGTA, FM, UPS, CL, CG, CT, CTA, HFS, EV Series

Chemical Family: Toxic and Corrosive Material Mixture

Chemical

Formula: Lead/Acid

Name: Battery, Storage, Lead Acid, Valve Regulated

SECTION 3 -- HAZARD IDENTIFICATION

Signs and Symptoms of Exposure	1. Acute Hazards	Do not open battery. Avoid contact with internal components. Internal components include lead and absorbed electrolyte. Electrolyte - Electrolyte is corrosive and contact may cause skin irritation and chemical burns. Electrolyte causes severe irritation and burns of eyes, nose and throat. Ingestion can cause severe burns and vomiting. Lead - Direct skin or eye contact may cause local irritation. Inhalation or ingestion of lead dust or fumes may result in headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia and leg, arm and joint pain.			
	2. Subchronic and Chronic Health Effects	Electrolyte - Repeated contact with electrolyte causes irritation and skin burns. Repeated exposure to mist may cause erosion of teeth, chronic eye irritation and/or chronic inflammation of the nose, throat and lungs. Lead - Prolonged exposure may cause central nervous system damage, gastrointestinal disturbances, anemia, irritability, metallic taste, insomnia, wrist-drop, kidney dysfunction and reproductive system disturbances. Pregnant women should be protected from excessive exposure to prevent lead from crossing the placental barrier and causing infant neurological disorders. California Proposition 65 Warning: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm, and during charging, strong inorganic acid mists containing sulfuric acid are evolved, a chemical Known to the State of California to cause cancer. Wash hands after handling.			
Medical Conditions Generally Aggravated by Exposure	Contact with internal components if battery is broken or opened, then persons with the following medical conditions must take precautions: pulmonary edema, bronchitis, emphysema, dental erosion and tracheobronchitis.				
Routes of Entry	Inhalation - YES Ingestion – YES		Eye Contact- YES		
Chemical(s) Listed as Carcinogen or potential Carcinogen		Proposition 65 - YES	National Toxicology Program - YES	I.A.R.C. Monographs - YES	O.S.H.A. - NO

SECTION 4 - FIRST AID MEASURES

Emergency and First Aid Procedures	Contact with internal components if battery is opened/broken.
1. Inhalation	Remove to fresh air and provide medical oxygen/CPR if needed. Obtain medical attention.
2. Eyes	Immediately flush with water for at least 15 minutes, hold eyelids open. Obtain medical attention.
3. Skin	Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention if necessary.
4. Ingestion	Do not induce vomiting. If conscious drink large amounts of water/milk. Obtain medical attention. Never give anything by mouth to an unconscious person.

SECTION 5 - FIREFIGHTING MEASURES

Flash Point – Not Applicable	Flammable Limits in Air % by Volume: Not Applicable	Extinguishing Media – Class ABC, CO ₂ , Halon	Auto-Ignition Temperature 675°F (polypropylene)
Special Fire Fighting Procedures	Lead/acid batteries do not burn, or burn with difficulty. Do not use water on fires where molten metal is present. Extinguish fire with agent suitable for surrounding combustible materials. Cool exterior of battery if exposed to fire to prevent rupture. The acid mist and vapors generated by heat or fire are corrosive. Use NIOSH approved self-contained breathing apparatus (SCBA) and full protective equipment operated in positive-pressure mode.		
Unusual Fire and Explosion Hazards	Sulfuric acid vapors are generated upon overcharge and polypropylene case failure. Use adequate ventilation. Avoid open flames/sparks/other sources of ignition near battery.		

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup: Avoid contact with any spilled material. Contain spill, isolate hazard area, and deny entry. Limit site access to emergency responders. Neutralize with sodium bicarbonate, soda ash, lime or other neutralizing agent. Place battery in suitable container for disposal. Dispose of contaminated material in accordance with applicable local, state and federal regulations. Sodium bicarbonate, soda ash, sand, lime or other neutralizing agent should be kept on-site for spill remediation.

Personal Precautions: Acid resistant aprons, boots and protective clothing. ANSI approved safety glasses with side shields/face shield recommended.

Environmental Precautions: Lead and its compounds and sulfuric acid can pose a severe threat to the environment. Contamination of water, soil and air should be prevented.

SECTION 7 - HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage	Store away from reactive materials, open flames and sources of ignition as defined in Section 10 – Stability and Reactivity Data. Store batteries in cool, dry, well-ventilated areas. Batteries should be stored under roof for protection against adverse weather conditions. Avoid damage to containers.
Other Precautions	GOOD PERSONAL HYGIENE AND WORK PRACTICES ARE MANDATORY. Refrain from eating, drinking or smoking in work areas. Thoroughly wash hands, face, neck and arms, before eating, drinking and smoking. Work clothes and equipment should remain in designated lead contaminated areas, and never taken home or laundered with personal clothing. Wash soiled clothing, work clothes and equipment before reuse.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection (Specify Type)	None required under normal conditions. Acid/gas NIOSH approved respirator is required when the PEL is exceeded or employee experiences respiratory irritation.				
Ventilation	Store and handle in dry ventilated area.	Local Exhaust	When PEL is exceeded.	Mechanical (General)	Not Applicable
Protective Gloves	Wear rubber or plastic acid resistant gloves.		Eye Protection	ANSI approved safety glasses with side shields/face shield recommended	
Other Protective Clothing or Equipment	Safety shower and eyewash.				

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: Not Applicable	Vapor Pressure	Not Applicable	Specific Gravity	1.250-1.320	pH <2	Melting Point:	>320°F (polypropylene)
Percent Volatile By Volume	Not Applicable	Vapor Density	Hydrogen: 0.069	(Air = 1)		Evaporation Rate	Not applicable
			Electrolyte: 3.4 @ STP	(Air = 1)			
Solubility In water	100% soluble (electrolyte)			Reactivity in Water	Electrolyte – Water Reactive (1)		
Appearance and Odor:	Battery: Co-polymer polypropylene, solid; may be contained within an outer casing of aluminum or steel. Case has metal terminals. Lead: Gray, metallic, solid; brown/grey oxide Electrolyte: Odorless, liquid absorbed in glass mat material. No apparent odor.						

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable	Conditions to Avoid: Avoid overcharging and smoking, or sparks near battery surface. High temperatures-cases decompose at >320°F.
Incompatibility (Materials to Avoid)	Sparks, open flames, keep battery away from strong oxidizers.
Hazardous Decomposition Products	Combustion can produce carbon dioxide and carbon monoxide.
Hazardous Polymerization	Hazardous Polymerization has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

GENERAL: The primary routes of exposure to lead are ingestion or inhalation of dust and fumes.

ACUTE:

INHALATION/INGESTION: Exposure to lead and its compounds may cause headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia, and pain in the legs, arms and joints. Kidney damage, as well as anemia, can occur from acute exposure.

CHRONIC:

INHALATION/INGESTION: Prolonged exposure to lead and its compounds may produce many of the symptoms of short-term exposure and may also cause central nervous system damage, gastrointestinal disturbances, anemia, and wrist drop. Symptoms of central nervous system damage include fatigue, headaches, tremors, hypertension, hallucination, convulsions and delirium. Kidney dysfunction and possible injury has also been associated with chronic lead poisoning. Chronic over-exposure to lead has been implicated as a causative agent for the impairment of male and female reproductive capacity, but there is at present, no substantiation of the implication. Pregnant women should be protected from excessive exposure. Lead can cross the placental barrier and unborn children may suffer neurological damage or developmental problems due to excessive lead exposure in pregnant women.

SECTION 12 - ECOLOGICAL INFORMATION

In most surface water and groundwater, lead forms compounds with anions such as hydroxides, carbonates, sulfates, and phosphates, and precipitates out of the water column. Lead may occur as sorbed ions or surface coatings on sediment mineral particles or may be carried in colloidal particles in surface water. Most lead is strongly retained in soil, resulting in little mobility. Lead may be immobilized by ion exchange with hydrous oxides or clays or by chelation with humic or fulvic acids in the soil. Lead (dissolved phase) is bioaccumulated by plants and animals, both aquatic and terrestrial.

SECTION 13 - DISPOSAL CONSIDERATIONS

Lead-acid batteries are completely recyclable. Return whole scrap batteries to distributor, manufacturer or lead smelter for recycling. For information on returning batteries to Vision Battery for recycling call 251-7779888. For neutralized spills, place residue in acid-resistant containers with sorbent material, sand or earth and dispose of in accordance with local, state and federal regulations for acid and lead compounds. Contact local and/or state environmental officials regarding disposal information.

SECTION 14 - TRANSPORT INFORMATION

All Vision AGM, Gel batteries CG, CP, FM, CL series and CTA series are valve regulated lead acid (VRLA) batteries.

Vision's VRLA batteries have passed vibration, pressure differential and free flowing acid tests under CFR 49 173.159(d) and meet IATA Special Provisions A48 and A67. The batteries are securely packaged, protected from short circuits and labeled "Non-Spillable." Vision's VRLA batteries are exempt from DOT Hazardous Material Regulations and IATA Dangerous Goods Regulations.

Note: The shipper has the option of shipping the batteries Hazmat regulated under UN2800. Additional labeling and paperwork would be required. See CFR 49 and IATA Dangerous Goods Regulations for more information.

U.S. DOT PROPER SHIPPING NAME: Batteries, wet, non-spillable

U.S. DOT HAZARD CLASS: 8

U.S. DOT ID NUMBER: UN2800

U.S. DOT PACKING GROUP: III

OR

Excepted from the requirements because batteries have passed the Vibration and Pressure Differential performance tests, and ruptured case test for Nonspillable designation.

U.S. DOT LABEL: CORROSIVE

IMO PROPER SHIPPING NAME: Batteries, wet, non-spillable

IMO U.N. CLASS: 8

IMO U.N. NUMBER: UN 2800

IMO LABEL: CORROSIVE

IMO VESSEL STOWAGE: A

Ems # - F-A, S-B

Lead-Acid Rechargeable Battery as per IMDG SP.238. And NON-DG Shipment

IATA PROPER SHIPPING NAME: Batteries, wet, non-spillable

IATA U.N. CLASS: 8

when

IATA U.N. NUMBER: UN 2800

IATA LABEL: CORROSIVE

ERG Code - 8L

OR

Excepted from the requirements because batteries have passed the vibration and pressure differential performance tests, and ruptured case test for nonspillable designation. And,

packaged for transport, the terminals are protected from short circuit.

SECTION 15 - REGULATORY INFORMATION

U.S. HAZARDOUS UNDER HAZARD COMMUNICATION STANDARD:

LEAD - YES
ARSENIC - YES
SULFURIC ACID - YES

INGREDIENTS LISTED ON TSCA INVENTORY:

YES

CERCLA SECTION 304 HAZARDOUS SUBSTANCES:

LEAD - YES
ARSENIC - YES
SULFURIC ACID - YES

RQ: N/A*
RQ: 1 POUND
RQ: 1000 POUNDS

* RQ: REPORTING NOT REQUIRED WHEN DIAMETER OF THE PIECES OF SOLID METAL RELEASED IS EQUAL TO OR EXCEEDS 100 μ m (micrometers).

EPCRA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE:

SULFURIC ACID - YES

EPCRA SECTION 313 TOXIC RELEASE INVENTORY:

LEAD - CAS NO: 7439-92-1
ARSENIC - CAS NO: 7440-38-2
SULFURIC ACID - CAS NO: 7664-93-9

SECTION 16 - OTHER INFORMATION

THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, VISION BATTERY MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. ALTHOUGH REASONABLE PRECAUTIONS HAVE BEEN TAKEN IN THE PREPARATION OF THE DATA CONTAINED HEREIN, IT IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION. THIS MATERIAL SAFETY DATA SHEET PROVIDES GUIDELINES FOR THE SAFE HANDLING AND USE OF THIS PRODUCT; IT DOES NOT AND CANNOT ADVISE ON ALL POSSIBLE SITUATIONS, THEREFORE, YOUR SPECIFIC USE OF THIS PRODUCT SHOULD BE EVALUATED TO DETERMINE IF ADDITIONAL PRECAUTIONS ARE REQUIRED.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export-controlled information.



检测
CNAS L0748



NO. 1214040008

检 验 报 告

Test Report

样品名称： 阀控式密封铅酸蓄电池 CP1232S 12V 3.2AH

Name of Goods: Valve Regulated Lead Acid Battery

委托单位： 深圳市雄韬电源科技股份有限公司

Consignor: /



上海化工研究院检测中心

Shanghai Research Institute of Chemical Industry Testing Centre

上海化工研究院检测中心
检 验 报 告
SRICI Testing Centre Test Report

No. 1214040008

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样品名称 Name of Sample	中文 Chinese	阀控式密封铅酸蓄电池 CP1232S 12V 3.2AH			
	英文 English	Valve Regulated Lead Acid Battery			
样品编号 Sample No.	1214040008				
委托单位 Consignor	深圳市雄韬电源科技股份有限公司 /				
生产单位 Manufacturer	深圳市雄韬电源科技股份有限公司 /				
检验方法 Test Method	联合国 关于危险货物运输的建议书 规章范本 (17th) ST/SG/AC.10/1/Rev.17 3.3章的特殊规定238 UNITED NATIONS Recommendations on the TRANSPORT OF DANGEROUS GOODS Regulations (17th)ST/SG/AC.10/1/Rev.17 Chapter 3.3 SPECIAL PROVISIONS 238				
判定标准 Criterion	联合国 关于危险货物运输的建议书 规章范本 (17th) ST/SG/AC.10/1/Rev.17 3.3章的特殊规定238 UNITED NATIONS Recommendations on the TRANSPORT OF DANGEROUS GOODS Regulations (17th)ST/SG/AC.10/1/Rev.17 Chapter 3.3 SPECIAL PROVISIONS 238				
样品外观 Appearance	黑色 塑胶外壳 Black Plastics cement shell				
样品接受日期 Accepted Date	2014-04-30	检测起始日期 Test Date	2014-05-04 — 2014-05-07		
检测项目 Test Items	振动试验;压差试验;55℃漏液试验 Vibration test,Pressure differential test,Leakage test at 55℃				
检验结论 Conclusion	受检样品通过所有项目检测,检测结果合格。 The sample has passed all of the testing items 生效日期(Date): 2014-05-09				
备注 Remark	无。None.				
委托单位地址 Consignor Address	/		邮政编码 Post Code 518120		

批准
Approver:
职务
Title:

张小明
审核
Checker:
副总工程师(Vice chief engineer)

编制
Compiler:

夏洁

上海化工研究院检测中心 检 验 报 告

SRICI Testing Centre Test Report

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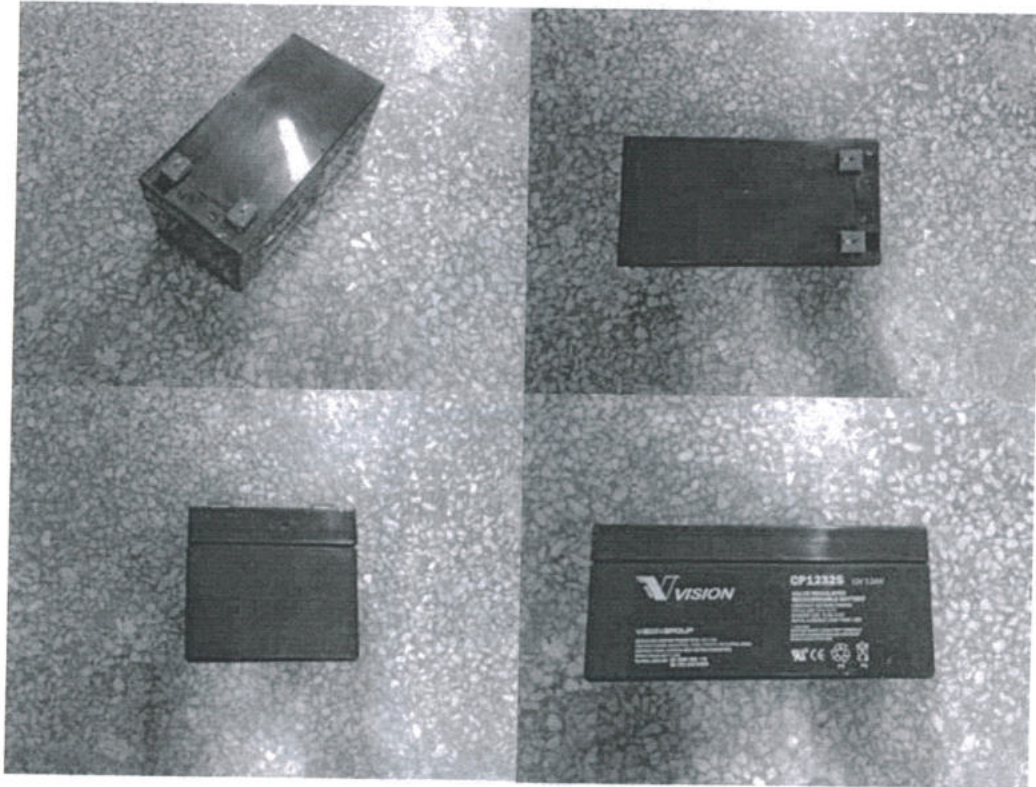
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序号 No	检验项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark
1	振动试验 Vibration test	规章范本 (17th) UN2800的 特殊规定238(a) UN Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(a)	无漏液。 None leakage of battery fluid.	合格。 Passed.	/
2	压差试验 Pressure differential test	规章范本 (17th) UN2800的 特殊规定238(a) UN Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(a)	无漏液。 None leakage of battery fluid.	合格。 Passed.	/
3	55℃漏液试验 Leakage test at 55℃	规章范本 (17th) UN2800的 特殊规定238(b) UN Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(b)	无漏液且无可见液体流 动。 None leakage of battery fluid and there is no free liquid to flow.	合格。 Passed.	/
4	以下空白 This space intentionally left blank				
5					
检验环境条件 Test Environment Condition		环境温度:18℃-20℃;环境湿度:/% Ambient temperature:18℃-20℃;Ambient humidity:/%			
分包检验情况 Subcontracted Test Condition		检验项目 Test Item	/		
		分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code
			地址 Address	/	电话 Tel

上海化工研究院检测中心
检 验 报 告
SRICI Testing Centre Test Report

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CP1232S **12V 3.2AH**



This product is used in a hermetically sealed state. So, it is not an object of the SDS system. This document is provided to customers as reference information for the safe handling of the product. The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Panasonic Corporation makes no warranty expressed or implied.

PRODUCT SAFETY DATA SHEET

1 Chemical product and company identification

Name of Product : Poly-carbonmonofluoride lithium battery
Name of Company : Panasonic Energy Co., Ltd.
Address : 1-1 Matsushita-cho, Moriguchi-city, Osaka, 570-8511, Japan
Emergency Contact : +81-80-9932-3190 (JST Working hours)
+81-6-6991-1141 (Holiday)

2 Hazards identification

GHS Classification : No applicable
Toxicity : Vapor generated from burning batteries, may irritate eyes, skin and throat.
Hazard : Electrolyte and lithium metal are inflammable.
Risk of explosion by fire if batteries are disposed in fire or heated above 100 degrees C.
Stacking or jumbling batteries may cause external short circuits, heat generation, fire or explosion.

3 Composition/information of ingredients

Component	Material	CAS RN	Content (%)
Positive electrode	Poly-carbonmonofluoride	51311-17-2	5 - 15
Negative electrode	Lithium metal	7439-93-2	0.9 - 4
Electrolyte	1,2-dimethoxyethane	110-71-4	2 - 4
	Gamma-butyrolactone	96-48-0	4 - 10
Others (Steel or Plastic parts)	Steel	7439-89-6, 7440-47-3	60 - 90
	Polypropylene	9003-07-0	1 - 10

Lithium content per cell

Model Number	Lithium content(g)	Model Number	Lithium content(g)	Model Number	Lithium content(g)	Model Number	Lithium content(g)
BR1216	0.008	BR1616	0.02	BR2016	0.02	BR2320	0.03
BR1220	0.01	BR1632	0.04	BR2020	0.03	BR2325	0.05
BR1225	0.01			BR2032	0.06	BR2330	0.08
						BR3032	0.15

4 First aid measures (in case of electrolyte leakage from the battery)

- Eye contact : Flush the eyes with plenty of clean water for at least 15 minutes immediately, without rubbing. Get immediate medical treatment. If appropriate procedures are not taken, this may cause eye injury.
- Skin contact : Wash the affected area under tepid running water using a mild soap. If appropriate procedures are not taken, this may cause sores on the skin. Get medical attention if irritation develops or persists.
- Inhalation : Remove to fresh air immediately. Get medical treatment immediately.

5 Firefighting measures

- Fire extinguishing agent : Alcohol-resistant foam and dry sand are effective.
- Extinguishing method : Be sure on the windward to extinguish the fire, since vapor may make eyes, nose and throat irritate, Wear the respiratory protection equipment in some cases.

6 Accidental release measures (in case of electrolyte leakage from the battery)

- Take up with absorbent cloth, treat cloth as inflammable.
- Move the battery away from the fire.

7 Handling and storage

- Handling :
 - When packing the batteries, do not allow battery terminals to contact each other, or contact with other metals. Be sure to pack batteries by providing partitions in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together.
 - Use strong material for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during their transportation.
 - Do not short-circuit, recharge, deform, throw into fire or disassemble.
 - Do not mix different type of batteries.
 - Do not solder directly onto batteries.
 - Insert the battery correctly in electrical equipment.
- Storage :
 - Do not let water penetrate into packaging boxes during their storage and transportation.
 - Do not store the battery in places of the high temperature or under direct sunlight.
 - Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, rain or frozen condition

8. Exposure controls and personal protection

Acceptable concentration : Not specified about Lithium Battery.
 Facilities : Nothing in particular.

Protective Equipment (in case of electrolyte leakage from the battery)

Respiratory Protection : For most condition no respiratory protection.
 Hand Protection : Safety gloves.
 Eye Protection : Safety goggle

9. Physical and chemical properties

Appearance : Coin shape
 Nominal Voltage : 3 V

10. Stability and reactivity

Since batteries utilize a chemical reaction they are actually considered a chemical product.

As such, battery performance will deteriorate over time even if stored for a long period of time without being used. In addition, the various usage conditions such as discharge, ambient temperature, etc. are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage.

11. Toxicological information

Swallowing can lead to chemical burns, perforation of soft tissue, and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.

12. Ecological information

In case of the worn out battery was disposed in land, the battery case may be corroded, and leak electrolyte. However, there is no environmental impact information.

Mercury (Hg), Cadmium (Cd) and Lead (Pb) are not used in cell.

13. Disposal considerations

When the battery is worn out, dispose of it under the ordinance of each local government.

14. Transport information

Handling

During the transportation of a large amount of batteries by ship, trailer or railway, do not leave them in the places of high temperatures and do not allow them to be exposed to condensation.

During the transportation do not allow packages to be dropped or damaged.

Proper shipping name : Lithium metal batteries

UN Number, UN Class : UN3090, Class9 (for the Air transport by PI968 Section IA or IB)
 : Exemption (for the Marine transport SP188 and the Air transport by Section II of PI 969 or 970)
 Even though the cells are classified as lithium metal batteries (UN3090 or UN3091), they are not subject to some requirements of Dangerous Goods Regulations because they meet the following:

1. for cells, the lithium content is not more than 1 g ;
2. each cell is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3 ;
3. each cell is manufactured in ISO9001 certified factory ;
4. the test summary is available from ;

<https://industrial.panasonic.com/ww/downloads/battery-test-summary>

Please refer to the following reference information about concrete ways of transportation. Actual content of packaging label and shipping documents varies by shipping companies. Make sure to confirm in advance with your shipping company.

Information of reference

	Reference	Packing Instruction(PI)/ Special provision(SP)	Note
Air transport	IATA DGR	PI 968 Section I A	Cells, Cargo Aircraft only; Net quantity per package Max. 35kg
		PI 968 Section I B	Cells, Cargo Aircraft only; net quantity per package Max. 2.5kg
		PI 969 Section II	Cells packed with equipment
		PI 970 Section II	Cells contained in equipment, button cell batteries
Marine transport	IMDG Code	SP 188	

15. Regulatory information

- IATA Dangerous Goods Regulations Edition 64 (IATA DGR)
- IMO International Maritime Dangerous Goods Code 2020 and 2022 Edition (IMDG Code)
- UN Recommendations on the Transportation of Dangerous Goods, Model Regulations
- UN Recommendations on the Transportation of Dangerous Goods, Manual of Tests and Criteria
- EU Battery Directive (2006/66/EC, 2013/56/EU)
- Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Act on Preventing Environmental Pollution of Mercury (Japan)

16. Other information

This PSDS is provided to customers as reference information in order to handle batteries safely.

It is necessary for the customer to take appropriate measures depending on the actual situation such as the individual handling, based on this information.

Prepared by : Engineering Department
Energy Device Business Division
Panasonic Energy Co., Ltd.

Lithium Battery Test Summary / UN38.3 試験結果要約**Product manufacturer**

Address/住所 1-1 Matsushita-cho, Moriguchi City, Osaka 570-8511, Japan
 Telephone/電話番号 +81-6-6994-4560
 e-mail un38.3_microbattery@ml.jp.panasonic.com
 URL https://www.panasonic.com/global/home.html

Test laboratory

Address/住所 1-1 Matsushita-cho, Moriguchi City, Osaka 570-8511, Japan
 Telephone/電話番号 +81-6-6994-4560
 e-mail un38.3_microbattery@ml.jp.panasonic.com
 URL https://www.panasonic.com/global/home.html

Description of Product / 製品情報

Model Number/品番 BR2330
 Type/タイプ Lithium metal cell
 Physical description/物理特性 Non-rechargeable, Coin
 Mass/質量 3.2 g
 Lithium content/リチウム含有量 0.08 g
 Watt-hour rating/ワット時定格値 Not applicable
 Nominal Voltage/公称電圧 3.0 V
 Nominal Capacity/公称容量 255 mAh

Test Results / 結果

Identification number/番号 CP0006-7
 Date of test report/レポート発行日 2008/07/30
 Reference edition/参照 UN Manual of Tests and Criteria 4th Amendment 1 edition

UN Manual of Tests and Criteria 国連勧告テスト判定基準	Results 結果	Remarks 備考
T1 : Altitude simulation / 高度シミュレーション	Pass / 合格	
T2 : Thermal Test / 温度試験	Pass / 合格	
T3 : Vibration / 振動	Pass / 合格	
T4 : Shock / 衝撃	Pass / 合格	
T5 : External short circuit / 外部短絡	Pass / 合格	
T6 : Impact / 衝突、Crush / 圧壊	Pass / 合格	Impact / 衝突
T7 : Overcharge / 過充電	-	for rechargeable batteries only / 充電式電池のみ
T8 : Forced discharge / 強制放電	Pass / 合格	

Hereby we certify that this model of Lithium battery meets the requirements of each test in the UN Manual of Tests and Criteria Part III, sub-section 38.3.

上記テストは国連勧告テスト(Manual of Tests and Criteria, Part III, sub-section 38.3.)に従い確認された結果であることを証明致します。

Signature:



Name and Title: Kazuyuki Amano / Manager

Energy Device Business Division

VISION BATTERY

Sealed Lead Acid Battery



MATERIAL SAFETY DATA SHEET

SECTION 1 - GENERAL INFORMATION

MANUFACTURER'S NAME: SHENZHEN CENTER POWER TECH CO., LTD	EMERGENCY TELEPHONE NO.: 86-755-84318088
ADDRESS: CENTER POWER INDUSTRIAL PARK TONGFU INDUSTRIAL DISTRICT DAPENG TOWN CHINA	OTHER INFORMATION CALLS: 86-755-84318031
PERSON RESPONSIBLE FOR PREPARATION Shouzhong Yi, Safety, Health & Environmental Affairs Manager	Revised Date: JAN 03, 2023

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

C.A.S.	PRINCIPAL HAZARDOUS COMPONENT(S) (chemical & common name(s))	Hazard Category	% Weight	ACGIH TLV - mg/m ³	OSHA PEL/TWA - mg/m ³
7439-92-1	Lead/Lead Oxide (Litharge)/Lead Sulfate	Acute-Chronic	60-70	0.05 mg/m ³	0.05 mg/m ³
7440-70-2	Calcium (lead calcium alloy)	Reactive	<0.15	Not Established	Not Established
7440-31-5	Tin	Chronic	<1	2	2
7440-38-2	Arsenic (inorganic)	Acute-Chronic	<1	0.01	0.01
7664-93-9	Sulfuric Acid (Battery Electrolyte)	Reactive-Oxidizer Acute -Chronic	10-15	1.0	1.0
Not applicable	Inert Ingredients	Not applicable	<6	Not Applicable	Not Applicable

Note: PEL's for individual states may differ from OSHA's PEL's. Check with local authorities for the applicable state PEL's.

OSHA – Occupational Safety and Health Administration; ACGIH – American Conference of Governmental Industrial Hygienists; NIOSH – National Institute for Occupational Safety and Health.

COMMON NAME: (Used on label) Sealed Lead-acid Battery

(Trade Name & Synonyms) lead acid: CP, CGA, CGTA, FM, UPS, CL, CG, CT, CTA, HFS, EV Series

Chemical Family: Toxic and Corrosive Material Mixture

Chemical

Formula: Lead/Acid

Name: Battery, Storage, Lead Acid, Valve Regulated

SECTION 3 -- HAZARD IDENTIFICATION

Signs and Symptoms of Exposure	1. Acute Hazards	Do not open battery. Avoid contact with internal components. Internal components include lead and absorbed electrolyte. Electrolyte - Electrolyte is corrosive and contact may cause skin irritation and chemical burns. Electrolyte causes severe irritation and burns of eyes, nose and throat. Ingestion can cause severe burns and vomiting. Lead - Direct skin or eye contact may cause local irritation. Inhalation or ingestion of lead dust or fumes may result in headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia and leg, arm and joint pain.			
	2. Subchronic and Chronic Health Effects	Electrolyte - Repeated contact with electrolyte causes irritation and skin burns. Repeated exposure to mist may cause erosion of teeth, chronic eye irritation and/or chronic inflammation of the nose, throat and lungs. Lead - Prolonged exposure may cause central nervous system damage, gastrointestinal disturbances, anemia, irritability, metallic taste, insomnia, wrist-drop, kidney dysfunction and reproductive system disturbances. Pregnant women should be protected from excessive exposure to prevent lead from crossing the placental barrier and causing infant neurological disorders. California Proposition 65 Warning: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm, and during charging, strong inorganic acid mists containing sulfuric acid are evolved, a chemical Known to the State of California to cause cancer. Wash hands after handling.			
Medical Conditions Generally Aggravated by Exposure	Contact with internal components if battery is broken or opened, then persons with the following medical conditions must take precautions: pulmonary edema, bronchitis, emphysema, dental erosion and tracheobronchitis.				
Routes of Entry	Inhalation - YES Ingestion – YES		Eye Contact- YES		
Chemical(s) Listed as Carcinogen or potential Carcinogen	Proposition 65 - YES		National Toxicology Program - YES	I.A.R.C. Monographs - YES	O.S.H.A. - NO

SECTION 4 - FIRST AID MEASURES

Emergency and First Aid Procedures	Contact with internal components if battery is opened/broken.
1. Inhalation	Remove to fresh air and provide medical oxygen/CPR if needed. Obtain medical attention.
2. Eyes	Immediately flush with water for at least 15 minutes, hold eyelids open. Obtain medical attention.
3. Skin	Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention if necessary.
4. Ingestion	Do not induce vomiting. If conscious drink large amounts of water/milk. Obtain medical attention. Never give anything by mouth to an unconscious person.

SECTION 5 - FIREFIGHTING MEASURES

Flash Point – Not Applicable	Flammable Limits in Air % by Volume: Not Applicable	Extinguishing Media – Class ABC, CO ₂ , Halon	Auto-Ignition Temperature 675°F (polypropylene)
Special Fire Fighting Procedures	Lead/acid batteries do not burn, or burn with difficulty. Do not use water on fires where molten metal is present. Extinguish fire with agent suitable for surrounding combustible materials. Cool exterior of battery if exposed to fire to prevent rupture. The acid mist and vapors generated by heat or fire are corrosive. Use NIOSH approved self-contained breathing apparatus (SCBA) and full protective equipment operated in positive-pressure mode.		
Unusual Fire and Explosion Hazards	Sulfuric acid vapors are generated upon overcharge and polypropylene case failure. Use adequate ventilation. Avoid open flames/sparks/other sources of ignition near battery.		

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup: Avoid contact with any spilled material. Contain spill, isolate hazard area, and deny entry. Limit site access to emergency responders. Neutralize with sodium bicarbonate, soda ash, lime or other neutralizing agent. Place battery in suitable container for disposal. Dispose of contaminated material in accordance with applicable local, state and federal regulations. Sodium bicarbonate, soda ash, sand, lime or other neutralizing agent should be kept on-site for spill remediation.

Personal Precautions: Acid resistant aprons, boots and protective clothing. ANSI approved safety glasses with side shields/face shield recommended.

Environmental Precautions: Lead and its compounds and sulfuric acid can pose a severe threat to the environment. Contamination of water, soil and air should be prevented.

SECTION 7 - HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage	Store away from reactive materials, open flames and sources of ignition as defined in Section 10 – Stability and Reactivity Data. Store batteries in cool, dry, well-ventilated areas. Batteries should be stored under roof for protection against adverse weather conditions. Avoid damage to containers.
Other Precautions	GOOD PERSONAL HYGIENE AND WORK PRACTICES ARE MANDATORY. Refrain from eating, drinking or smoking in work areas. Thoroughly wash hands, face, neck and arms, before eating, drinking and smoking. Work clothes and equipment should remain in designated lead contaminated areas, and never taken home or laundered with personal clothing. Wash soiled clothing, work clothes and equipment before reuse.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection (Specify Type)	None required under normal conditions. Acid/gas NIOSH approved respirator is required when the PEL is exceeded or employee experiences respiratory irritation.				
Ventilation	Store and handle in dry ventilated area.	Local Exhaust	When PEL is exceeded.	Mechanical (General)	Not Applicable
Protective Gloves	Wear rubber or plastic acid resistant gloves.		Eye Protection	ANSI approved safety glasses with side shields/face shield recommended	
Other Protective Clothing or Equipment	Safety shower and eyewash.				

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: Not Applicable	Vapor Pressure	Not Applicable	Specific Gravity	1.250-1.320 pH <2	Melting Point: >320°F (polypropylene)
Percent Volatile By Volume	Not Applicable	Vapor Density	Hydrogen: 0.069 (Air = 1) Electrolyte: 3.4 @ STP (Air = 1)	Evaporation Rate	Not applicable
Solubility In water	100% soluble (electrolyte)		Reactivity in Water	Electrolyte – Water Reactive (1)	
Appearance and Odor:	Battery: Co-polymer polypropylene, solid; may be contained within an outer casing of aluminum or steel. Case has metal terminals. Lead: Gray, metallic, solid; brown/grey oxide Electrolyte: Odorless, liquid absorbed in glass mat material. No apparent odor.				

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable	Conditions to Avoid: Avoid overcharging and smoking, or sparks near battery surface. High temperatures-cases decompose at >320°F.
Incompatibility (Materials to Avoid)	Sparks, open flames, keep battery away from strong oxidizers.
Hazardous Decomposition Products	Combustion can produce carbon dioxide and carbon monoxide.
Hazardous Polymerization	Hazardous Polymerization has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

GENERAL: The primary routes of exposure to lead are ingestion or inhalation of dust and fumes.

ACUTE:

INHALATION/INGESTION: Exposure to lead and its compounds may cause headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia, and pain in the legs, arms and joints. Kidney damage, as well as anemia, can occur from acute exposure.

CHRONIC:

INHALATION/INGESTION: Prolonged exposure to lead and its compounds may produce many of the symptoms of short-term exposure and may also cause central nervous system damage, gastrointestinal disturbances, anemia, and wrist drop. Symptoms of central nervous system damage include fatigue, headaches, tremors, hypertension, hallucination, convulsions and delirium. Kidney dysfunction and possible injury has also been associated with chronic lead poisoning. Chronic over-exposure to lead has been implicated as a causative agent for the impairment of male and female reproductive capacity, but there is at present, no substantiation of the implication. Pregnant women should be protected from excessive exposure. Lead can cross the placental barrier and unborn children may suffer neurological damage or developmental problems due to excessive lead exposure in pregnant women.

SECTION 12 - ECOLOGICAL INFORMATION

In most surface water and groundwater, lead forms compounds with anions such as hydroxides, carbonates, sulfates, and phosphates, and precipitates out of the water column. Lead may occur as sorbed ions or surface coatings on sediment mineral particles or may be carried in colloidal particles in surface water. Most lead is strongly retained in soil, resulting in little mobility. Lead may be immobilized by ion exchange with hydrous oxides or clays or by chelation with humic or fulvic acids in the soil. Lead (dissolved phase) is bioaccumulated by plants and animals, both aquatic and terrestrial.

SECTION 13 - DISPOSAL CONSIDERATIONS

Lead-acid batteries are completely recyclable. Return whole scrap batteries to distributor, manufacturer or lead smelter for recycling. For information on returning batteries to Vision Battery for recycling call 251-7779888. For neutralized spills, place residue in acid-resistant containers with sorbent material, sand or earth and dispose of in accordance with local, state and federal regulations for acid and lead compounds. Contact local and/or state environmental officials regarding disposal information.

SECTION 14 - TRANSPORT INFORMATION

All Vision AGM, Gel batteries CG, CP, FM, CL series and CTA series are valve regulated lead acid (VRLA) batteries.

Vision's VRLA batteries have passed vibration, pressure differential and free flowing acid tests under CFR 49 173.159(d) and meet IATA Special Provisions A48 and A67. The batteries are securely packaged, protected from short circuits and labeled "Non-Spillable." Vision's VRLA batteries are exempt from DOT Hazardous Material Regulations and IATA Dangerous Goods Regulations.

Note: The shipper has the option of shipping the batteries Hazmat regulated under UN2800. Additional labeling and paperwork would be required. See CFR 49 and IATA Dangerous Goods Regulations for more information.

U.S. DOT PROPER SHIPPING NAME: Batteries, wet, non-spillable

U.S. DOT HAZARD CLASS: 8

U.S. DOT ID NUMBER: UN2800

U.S. DOT PACKING GROUP: III

OR

Excepted from the requirements because batteries have passed the Vibration and Pressure Differential performance tests, and ruptured case test for Nonspillable designation.

U.S. DOT LABEL: CORROSIVE

IMO PROPER SHIPPING NAME: Batteries, wet, non-spillable

IMO U.N. CLASS: 8

IMO U.N. NUMBER: UN 2800

IMO LABEL: CORROSIVE

IMO VESSEL STOWAGE: A

Ems # - F-A, S-B

Lead-Acid Rechargeable Battery as per IMDG SP.238. And NON-DG Shipment

IATA PROPER SHIPPING NAME: Batteries, wet, non-spillable

IATA U.N. CLASS: 8

when

IATA U.N. NUMBER: UN 2800

IATA LABEL: CORROSIVE

ERG Code - 8L

OR

Excepted from the requirements because batteries have passed the vibration and pressure differential performance tests, and ruptured case test for nonspillable designation. And, packaged for transport, the terminals are protected from short circuit.

SECTION 15 - REGULATORY INFORMATION

U.S. HAZARDOUS UNDER HAZARD COMMUNICATION STANDARD:

LEAD - YES
ARSENIC - YES
SULFURIC ACID - YES

INGREDIENTS LISTED ON TSCA INVENTORY:

YES

CERCLA SECTION 304 HAZARDOUS SUBSTANCES:

LEAD - YES
ARSENIC - YES
SULFURIC ACID - YES

RQ: N/A*
RQ: 1 POUND
RQ: 1000 POUNDS

* RQ: REPORTING NOT REQUIRED WHEN DIAMETER OF THE PIECES OF SOLID METAL RELEASED IS EQUAL TO OR EXCEEDS 100 μ m (micrometers).

EPCRA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE:

SULFURIC ACID - YES

EPCRA SECTION 313 TOXIC RELEASE INVENTORY:

LEAD - CAS NO: 7439-92-1
ARSENIC - CAS NO: 7440-38-2
SULFURIC ACID - CAS NO: 7664-93-9

SECTION 16 - OTHER INFORMATION

THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, VISION BATTERY MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. ALTHOUGH REASONABLE PRECAUTIONS HAVE BEEN TAKEN IN THE PREPARATION OF THE DATA CONTAINED HEREIN, IT IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION. THIS MATERIAL SAFETY DATA SHEET PROVIDES GUIDELINES FOR THE SAFE HANDLING AND USE OF THIS PRODUCT; IT DOES NOT AND CANNOT ADVISE ON ALL POSSIBLE SITUATIONS, THEREFORE, YOUR SPECIFIC USE OF THIS PRODUCT SHOULD BE EVALUATED TO DETERMINE IF ADDITIONAL PRECAUTIONS ARE REQUIRED.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export-controlled information.



检测
CNAS L0748



NO. 1214040008

检 验 报 告

Test Report

样品名称： 阀控式密封铅酸蓄电池 CP1232S 12V 3.2AH

Name of Goods: Valve Regulated Lead Acid Battery

委托单位： 深圳市雄韬电源科技股份有限公司

Consignor: /



上海化工研究院检测中心

Shanghai Research Institute of Chemical Industry Testing Centre

上海化工研究院检测中心
检 验 报 告
SRICI Testing Centre Test Report

No. 1214040008

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样品名称 Name of Sample	中文 Chinese	阀控式密封铅酸蓄电池 CP1232S 12V 3.2AH			
	英文 English	Valve Regulated Lead Acid Battery			
样品编号 Sample No.	1214040008				
委托单位 Consignor	深圳市雄韬电源科技股份有限公司 /				
生产单位 Manufacturer	深圳市雄韬电源科技股份有限公司 /				
检验方法 Test Method	联合国 关于危险货物运输的建议书 规章范本 (17th) ST/SG/AC.10/1/Rev.17 3.3章的特殊规定238 UNITED NATIONS Recommendations on the TRANSPORT OF DANGEROUS GOODS Regulations (17th)ST/SG/AC.10/1/Rev.17 Chapter 3.3 SPECIAL PROVISIONS 238				
判定标准 Criterion	联合国 关于危险货物运输的建议书 规章范本 (17th) ST/SG/AC.10/1/Rev.17 3.3章的特殊规定238 UNITED NATIONS Recommendations on the TRANSPORT OF DANGEROUS GOODS Regulations (17th)ST/SG/AC.10/1/Rev.17 Chapter 3.3 SPECIAL PROVISIONS 238				
样品外观 Appearance	黑色 塑胶外壳 Black Plastics cement shell				
样品接受日期 Accepted Date	2014-04-30	检测起始日期 Test Date	2014-05-04 — 2014-05-07		
检测项目 Test Items	振动试验;压差试验;55℃漏液试验 Vibration test,Pressure differential test,Leakage test at 55℃				
检验结论 Conclusion	受检样品通过所有项目检测,检测结果合格。 The sample has passed all of the testing items 生效日期(Date): 2014-05-09				
备注 Remark	无。None.				
委托单位地址 Consignor Address	/		邮政编码 Post Code 518120		

批准
Approver:
职务
Title:

张小明

副总工程师(Vice chief engineer)

审核
Checker:

董学胜

编制
Compiler:

夏浩

上海化工研究院检测中心 检 验 报 告

SRICI Testing Centre Test Report

No. 1214040008

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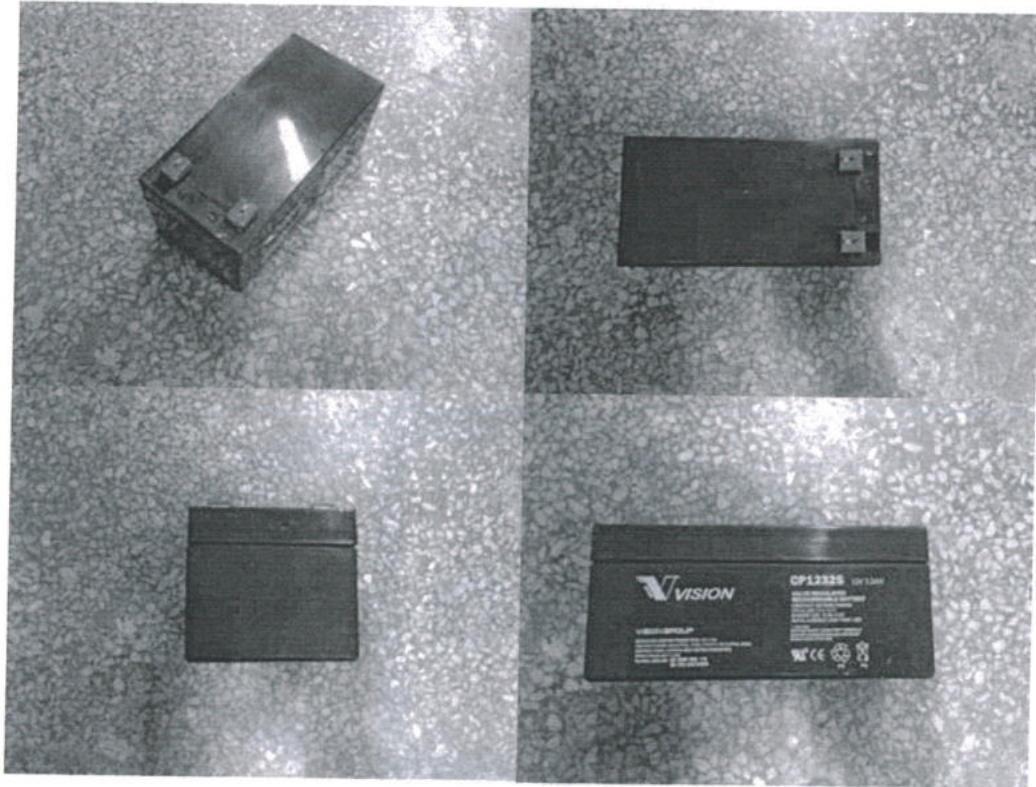
Page 2 of 3

序号 No	检验项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark
1	振动试验 Vibration test	规章范本(17th) UN2800的特殊规定238(a) UN Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(a)	无漏液。 None leakage of battery fluid.	合格。 Passed.	/
2	压差试验 Pressure differential test	规章范本(17th) UN2800的特殊规定238(a) UN Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(a)	无漏液。 None leakage of battery fluid.	合格。 Passed.	/
3	55℃漏液试验 Leakage test at 55℃	规章范本(17th) UN2800的特殊规定238(b) UN Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(b)	无漏液且无可见液体流动。 None leakage of battery fluid and there is no free liquid to flow.	合格。 Passed.	/
4	以下空白 This space intentionally left blank				
5					
检验环境条件 Test Environment Condition		环境温度:18℃-20℃;环境湿度:/% Ambient temperature:18℃-20℃;Ambient humidity:/%			
分包检验情况 Subcontracted Test Condition		检验项目 Test Item	/		
		分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code
			地址 Address	/	电话 Tel

上海化工研究院检测中心
检 验 报 告
SRICI Testing Centre Test Report

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上海化工研究院
检测中心

CP1232S**12V 3.2AH**

This product is used in a hermetically sealed state. So, it is not an object of the SDS system. This document is provided to customers as reference information for the safe handling of the product. The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Panasonic Corporation makes no warranty expressed or implied.

PRODUCT SAFETY DATA SHEET

1 Chemical product and company identification

Name of Product : Poly-carbonmonofluoride lithium battery
Name of Company : Panasonic Energy Co., Ltd.
Address : 1-1 Matsushita-cho, Moriguchi-city, Osaka, 570-8511, Japan
Emergency Contact : +81-80-9932-3190 (JST Working hours)
+81-6-6991-1141 (Holiday)

2 Hazards identification

GHS Classification : No applicable
Toxicity : Vapor generated from burning batteries, may irritate eyes, skin and throat.
Hazard : Electrolyte and lithium metal are inflammable.
Risk of explosion by fire if batteries are disposed in fire or heated above 100 degrees C.
Stacking or jumbling batteries may cause external short circuits, heat generation, fire or explosion.

3 Composition/information of ingredients

Component	Material	CAS RN	Content (%)
Positive electrode	Poly-carbonmonofluoride	51311-17-2	5 - 15
Negative electrode	Lithium metal	7439-93-2	0.9 - 4
Electrolyte	1,2-dimethoxyethane	110-71-4	2 - 4
	Gamma-butyrolactone	96-48-0	4 - 10
Others (Steel or Plastic parts)	Steel	7439-89-6, 7440-47-3	60 - 90
	Polypropylene	9003-07-0	1 - 10

Lithium content per cell

Model Number	Lithium content(g)	Model Number	Lithium content(g)	Model Number	Lithium content(g)	Model Number	Lithium content(g)
BR1216	0.008	BR1616	0.02	BR2016	0.02	BR2320	0.03
BR1220	0.01	BR1632	0.04	BR2020	0.03	BR2325	0.05
BR1225	0.01			BR2032	0.06	BR2330	0.08
						BR3032	0.15

4 First aid measures (in case of electrolyte leakage from the battery)

- Eye contact : Flush the eyes with plenty of clean water for at least 15 minutes immediately, without rubbing. Get immediate medical treatment. If appropriate procedures are not taken, this may cause eye injury.
- Skin contact : Wash the affected area under tepid running water using a mild soap. If appropriate procedures are not taken, this may cause sores on the skin. Get medical attention if irritation develops or persists.
- Inhalation : Remove to fresh air immediately. Get medical treatment immediately.

5 Firefighting measures

- Fire extinguishing agent : Alcohol-resistant foam and dry sand are effective.
- Extinguishing method : Be sure on the windward to extinguish the fire, since vapor may make eyes, nose and throat irritate, Wear the respiratory protection equipment in some cases.

6 Accidental release measures (in case of electrolyte leakage from the battery)

- Take up with absorbent cloth, treat cloth as inflammable.
- Move the battery away from the fire.

7 Handling and storage

- Handling : • When packing the batteries, do not allow battery terminals to contact each other, or contact with other metals. Be sure to pack batteries by providing partitions in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together.
- Use strong material for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during their transportation.
- Do not short-circuit, recharge, deform, throw into fire or disassemble.
- Do not mix different type of batteries.
- Do not solder directly onto batteries.
- Insert the battery correctly in electrical equipment.
- Storage : • Do not let water penetrate into packaging boxes during their storage and transportation.
- Do not store the battery in places of the high temperature or under direct sunlight.
- Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, rain or frozen condition

8. Exposure controls and personal protection

Acceptable concentration : Not specified about Lithium Battery.
Facilities : Nothing in particular.

Protective Equipment (in case of electrolyte leakage from the battery)

Respiratory Protection : For most condition no respiratory protection.
Hand Protection : Safety gloves.
Eye Protection : Safety goggle

9. Physical and chemical properties

Appearance : Coin shape
Nominal Voltage : 3 V

10. Stability and reactivity

Since batteries utilize a chemical reaction they are actually considered a chemical product.

As such, battery performance will deteriorate over time even if stored for a long period of time without being used. In addition, the various usage conditions such as discharge, ambient temperature, etc. are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage.

11. Toxicological information

Swallowing can lead to chemical burns, perforation of soft tissue, and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.

12. Ecological information

In case of the worn out battery was disposed in land, the battery case may be corroded, and leak electrolyte. However, there is no environmental impact information.

Mercury (Hg), Cadmium (Cd) and Lead (Pb) are not used in cell.

13. Disposal considerations

When the battery is worn out, dispose of it under the ordinance of each local government.

14. Transport information

Handling

During the transportation of a large amount of batteries by ship, trailer or railway, do not leave them in the places of high temperatures and do not allow them to be exposed to condensation.

During the transportation do not allow packages to be dropped or damaged.

Proper shipping name : Lithium metal batteries

UN Number, UN Class : UN3090, Class9 (for the Air transport by PI968 Section IA or IB)
: Exemption (for the Marine transport SP188 and the Air transport by Section II of PI 969 or 970)
Even though the cells are classified as lithium metal batteries (UN3090 or UN3091), they are not subject to some requirements of Dangerous Goods Regulations because they meet the following:

1. for cells, the lithium content is not more than 1 g ;
2. each cell is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3 ;
3. each cell is manufactured in ISO9001 certified factory ;
4. the test summary is available from ;

<https://industrial.panasonic.com/ww/downloads/battery-test-summary>

Please refer to the following reference information about concrete ways of transportation. Actual content of packaging label and shipping documents varies by shipping companies. Make sure to confirm in advance with your shipping company.

Information of reference

	Reference	Packing Instruction(PI)/ Special provision(SP)	Note
Air transport	IATA DGR	PI 968 Section I A	Cells, Cargo Aircraft only; Net quantity per package Max. 35kg
		PI 968 Section I B	Cells, Cargo Aircraft only; net quantity per package Max. 2.5kg
		PI 969 Section II	Cells packed with equipment
		PI 970 Section II	Cells contained in equipment, button cell batteries
Marine transport	IMDG Code	SP 188	

15. Regulatory information

- IATA Dangerous Goods Regulations Edition 64 (IATA DGR)
- IMO International Maritime Dangerous Goods Code 2020 and 2022 Edition (IMDG Code)
- UN Recommendations on the Transportation of Dangerous Goods, Model Regulations
- UN Recommendations on the Transportation of Dangerous Goods, Manual of Tests and Criteria
- EU Battery Directive (2006/66/EC, 2013/56/EU)
- Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Act on Preventing Environmental Pollution of Mercury (Japan)

16. Other information

This PSDS is provided to customers as reference information in order to handle batteries safely. It is necessary for the customer to take appropriate measures depending on the actual situation such as the individual handling, based on this information.

Prepared by : Engineering Department
Energy Device Business Division
Panasonic Energy Co., Ltd.

Lithium Battery Test Summary / UN38.3 試験結果要約**Product manufacturer**

Address/住所 1-1 Matsushita-cho, Moriguchi City, Osaka 570-8511, Japan
 Telephone/電話番号 +81-6-6994-4560
 e-mail un38.3_microbattery@ml.jp.panasonic.com
 URL https://www.panasonic.com/global/home.html

Test laboratory

Address/住所 1-1 Matsushita-cho, Moriguchi City, Osaka 570-8511, Japan
 Telephone/電話番号 +81-6-6994-4560
 e-mail un38.3_microbattery@ml.jp.panasonic.com
 URL https://www.panasonic.com/global/home.html

Description of Product / 製品情報

Model Number/品番 BR2330
 Type/タイプ Lithium metal cell
 Physical description/物理特性 Non-rechargeable, Coin
 Mass/質量 3.2 g
 Lithium content/リチウム含有量 0.08 g
 Watt-hour rating/ワット時定格値 Not applicable
 Nominal Voltage/公称電圧 3.0 V
 Nominal Capacity/公称容量 255 mAh

Test Results / 結果

Identification number/番号 CP0006-7
 Date of test report/レポート発行日 2008/07/30
 Reference edition/参照 UN Manual of Tests and Criteria 4th Amendment 1 edition

UN Manual of Tests and Criteria 国連勧告テスト判定基準	Results 結果	Remarks 備考
T1 : Altitude simulation / 高度シミュレーション	Pass / 合格	
T2 : Thermal Test / 温度試験	Pass / 合格	
T3 : Vibration / 振動	Pass / 合格	
T4 : Shock / 衝撃	Pass / 合格	
T5 : External short circuit / 外部短絡	Pass / 合格	
T6 : Impact / 衝突、Crush / 圧壊	Pass / 合格	Impact / 衝突
T7 : Overcharge / 過充電	-	for rechargeable batteries only / 充電式電池のみ
T8 : Forced discharge / 強制放電	Pass / 合格	

Hereby we certify that this model of Lithium battery meets the requirements of each test in the UN Manual of Tests and Criteria Part III, sub-section 38.3.

上記テストは国連勧告テスト(Manual of Tests and Criteria, Part III, sub-section 38.3.)に従い確認された結果であることを証明致します。

Signature:



Name and Title: Kazuyuki Amano / Manager

Energy Device Business Division

Safety data sheet

according to 1907/2006/EC amended by Regulation 878/2020

Printing date: 07.03.2023

Revision date: 07.03.2023

Document No.: SDS-CSB-018

Version No.: 6.00

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Valve Regulated Lead-acid Battery (VRLA Battery)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Application of the substance / the preparation: Batteries

Uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

CSB Energy Technology Co., Ltd.

No. 16 Gongye W. Rd.

Erzhen Village, Guantian District

Tainan City 72048

Taiwan (R.O.C.)

Phone: +886-6-698-7600

Fax: +886-6-698-7605

E-mail: service@csb-battery.com.tw

1.4 Emergency telephone number:

NVIC: +31 (0)88 755 8000: Only for the purpose of informing medical personnel in case of acute intoxications

Taiwan Office: +886-2-2880-5600 (Business hour in Taiwan)

Europe Office: +31 (0) 180 418 140 (Keurmeesterstraat 28-30, 2984 BA Ridderkerk, The Netherlands)

Chemtrec: (800) 424-9300 / +1 703 527-3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Carc. 1B H350i May cause cancer by inhalation.

Repr. 1A H360FD-H362 May damage fertility. May damage the unborn child. May cause harm to breast-fed children.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS05 GHS07 GHS08 GHS09

Signal word Danger

Hazard-determining components of labelling:

lead dioxide

sulphuric acid

lead

Fibrous Glass

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Hazard statements

- H302+H332 Harmful if swallowed or if inhaled.
 H314 Causes severe skin burns and eye damage.
 H350i May cause cancer by inhalation.
 H360FD-H362 May damage fertility. May damage the unborn child. May cause harm to breast-fed children.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P260 Do not breathe dusts or mists.
 P263 Avoid contact during pregnancy and while nursing.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

- EUH201 Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
 Restricted to professional users.

2.3 Other hazards**Results of PBT and vPvB assessment**

- PBT:** Not determined.
vPvB: Not determined.

SECTION 3: Composition/information on ingredients**3.2 Mixtures****Description:**

CAS: 9003-07-0	Polypropylene	5 - 9%
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Dangerous components:

CAS: 7439-92-1 EC number: 231-100-4	lead Repr. 1A, H360FD-H362; STOT RE 1, H372	40 - 60%
CAS: 1309-60-0 EC number: 215-174-5 Index number: 082-001-00-6	lead dioxide Repr. 1A, H360Df; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H332, EUH201 Specific concentration limits: Repr. 2; H361f: C ≥ 2.5 % STOT RE 2; H373: C ≥ 0.5 %	15 - 30%
CAS: 7664-93-9 EC number: 231-639-5 Index number: 016-020-00-8	sulphuric acid Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 15 % Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 %	20 - 30%
CAS: 7446-14-2 EC number: 231-198-9 Index number: 082-001-00-6	lead sulphate Repr. 1A, H360Df; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H332, EUH201 Specific concentration limits: Repr. 2; H361f: C ≥ 2.5 % STOT RE 2; H373: C ≥ 0.5 %	1 - 10%

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CAS: 65997-17-3	Fibrous Glass	I - 2%
EC number: 266-046-0	Carc. 1A, H350i	
· SVHC		
CAS: 7439-92-1	lead	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:**

Take affected persons out of danger area and lay down.

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately rinse with water.

Call a doctor immediately.

· **After eye contact:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Call a doctor immediately.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do NOT induce vomiting.

Call for a doctor immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:**

CO₂ powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· 5.2 Special hazards arising from the substance or mixture

There is a possibility of explosion of the product by heat.

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide

Carbon dioxide

Sulphur oxides (SO_x)

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

· **Additional information**

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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SECTION 6: Accidental release measures**· 6.1 Personal precautions, protective equipment and emergency procedures**

Do not touch or walk through the leakage.

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

Avoid formation of dust.

Keep away from ignition sources.

· 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.**· 6.3 Methods and material for containment and cleaning up:**

Absorb spillage with dry earth, sand or other fire retardant material or covered by, put into sealed container for waste disposal. And then, neutralize the spillage with sodium bicarbonate or slaked lime, and wash off with plenty of water.

Use neutralising agent.

Pick up mechanically.

Dispose of the material collected according to regulations.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**· 7.1 Precautions for safe handling**

Do not dismantle or modify the product.

Do not do short-circuit between the terminals.

Ensure good ventilation/exhaustion at the workplace.

· Information about fire and explosion protection:

Hydrogen emission will occur during charging which will form explosive air mixture.

Keep ignition sources away - Do not smoke.

· 7.2 Conditions for safe storage, including any incompatibilities**· Storage:****· Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**· Information about storage in one common storage facility:** Store away from oxidising agents.**· Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· 7.3 Specific end use(s) No further relevant information available.**SECTION 8: Exposure controls/personal protection****· 8.1 Control parameters****· Ingredients with limit values that require monitoring at the workplace:****CAS: 7439-92-1 lead**OEL (Ireland) Long-term value: 0.15 mg/m³
Repr1A, BOELVBOELV (EU) Long-term value: 0.15 mg/m³
as Pb

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CAS: 1309-60-0 lead dioxide	
OEL (Ireland)	Long-term value: 0.15 mg/m ³ Repr1A, BOELV
BOELV (EU)	Long-term value: 0.15 mg/m ³ as Pb
CAS: 7664-93-9 sulphuric acid	
OEL (Ireland)	Long-term value: 0.05 mg/m ³ IOELV
IOELV (EU)	Long-term value: 0.05 mg/m ³
CAS: 7446-14-2 lead sulphate	
OEL (Ireland)	Long-term value: 0.15 mg/m ³ Repr1A, BOELV
BOELV (EU)	Long-term value: 0.15 mg/m ³ as Pb

· 8.2 Exposure controls

· **Appropriate engineering controls** No further data; see item 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**



Protective gloves

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection** Safety glasses

· **Body protection:** Protective work clothing

· **Environmental exposure controls** No further relevant information available.

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Solid
· Form:	Solid
· Colour:	Not determined.
· Odour:	Not determined.
· Odour threshold:	Not determined.
· Melting point/freezing point:	Not determined.
· Boiling point or initial boiling point and boiling range	Not applicable.
· Flammability	Not determined.
· Lower and upper explosion limit	
· Lower:	4 Vol %
· Upper:	75 Vol %
· Flash point:	Non-flammable.
· Ignition temperature:	Not combustible.
· Decomposition temperature:	Not determined.
· pH	≤ 1
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water:	Insoluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not applicable.
· Relative gas density	Not applicable.
· Particle characteristics	See item 3.

· 9.2 Other information

· Explosive properties:	Product does not present an explosion hazard.
· Oxidising properties	No
· Evaporation rate	Not applicable.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** No decomposition if used and stored according to specifications.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
May produce violent reactions with bases.
Reacts with metals forming hydrogen.
- **10.4 Conditions to avoid** Keep away from heat and direct sunlight.
- **10.5 Incompatible materials:**
Strong oxidizing agents
Reducing agent
Alkaline materials (bases)
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**· **Acute toxicity**

Harmful if swallowed or if inhaled.

· **LD/LC50 values relevant for classification:****CAS: 7439-92-1 lead**

Inhalative LC50 (4h) 11 mg/L (vapour)

CAS: 7664-93-9 sulphuric acid

Oral LD50 2140 mg/kg (Rat)

Inhalative LC50 (4h) 0.375 mg/L (Rat) (OECD Guideline 403, inhalation: aerosol)

· **Skin corrosion/irritation**

Causes severe skin burns and eye damage.

· **Serious eye damage/irritation**

Causes serious eye damage.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.· **Carcinogenicity**

May cause cancer by inhalation.

· **Reproductive toxicity**

May damage fertility. May damage the unborn child. May cause harm to breast-fed children.

· **STOT-single exposure** Based on available data, the classification criteria are not met.· **STOT-repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

· **Aspiration hazard** Based on available data, the classification criteria are not met.· **11.2 Information on other hazards**· **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information· **12.1 Toxicity**· **Aquatic toxicity:****CAS: 7664-93-9 sulphuric acid**LC50 (96h) (static) > 16 - < 28 mg/L (Fish) (Lepomis macrochirus)
nominalErC50 (72h) (static) > 100 mg/L (Algae) (OECD Guideline 201, Desmodesmus subspicatus)
nominalEC50 (48h) (static) > 100 mg/L (Daphnia) (OECD Guideline 202, Daphnia magna)
nominal**CAS: 7446-14-2 lead sulphate**

IC50 0.5 mg/L (Daphnia) (48h, Daphnia magna)

· **12.2 Persistence and degradability** No further relevant information available.· **12.3 Bioaccumulative potential** No further relevant information available.· **12.4 Mobility in soil** No further relevant information available.· **12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packaging**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---|---|
| · 14.1 UN number or ID number | UN2800 |
| · ADR/RID/ADN, IMDG, IATA | |
| · 14.2 UN proper shipping name | |
| · ADR/RID/ADN | 2800 BATTERIES, WET, NON-SPILLABLE, electric storage, ENVIRONMENTALLY HAZARDOUS |
| · IMDG, IATA | BATTERIES, WET, NON-SPILLABLE, electric storage |
| · 14.3 Transport hazard class(es) | |
| · ADR/RID/ADN, IMDG, IATA | |
|  | |
| · Class | 8 Corrosive substances. |
| · Label | 8 |
| · 14.4 Packing group | |
| · ADR/RID/ADN, IMDG, IATA | Void |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user | Warning: Corrosive substances. |
| · Hazard identification number (Kemler code): | 80 |
| · EMS Number: | F-A,S-B |
| · Stowage Category | A |
| · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| · Transport/Additional information: | |
| · ADR/RID/ADN | E |
| · Tunnel restriction code | |
| · Remarks: | <u>Special Provision:</u>
<u>ADR/RID:</u>
New and spent (used) batteries are exempted from all ADR/RID (special provision 598)
SEA transport:
non-Spillable batteries meet the requirements of Special Provision 238, they are exempted from all IMDG codes and are not subject to special regulation for sea |

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transport.

Air transport:

Special Provision A67: CSB's VRLA batteries meet the requirements of Packing Instruction 872.

The battery has been prepared for transport so as to prevent:

- a) A short circuit by the effective insulation of exposed terminals; and
- b) Unintentional activation.

Remarks:

All batteries are identified as "Battery, Electric Storage, Wet, Non-spillable" when transported by air, sea or by land transportation.

The battery(s) must be identified as above on the Bill of Lading and properly packed with their terminals protected from short circuit.

Our battery(s) warning label identifies each battery as NON SPILLABLE.

CSB VRLA-AGM batteries are classified as "Non spillable" for the purpose of transportation as result of passing the Vibration and Pressure Differential Test.

CSB VRLA-AGM batteries can be safely transported on deck, or under deck stored on either a passenger or cargo vessel as result of passing the Vibration and Pressure Differential Tests as described in the IMDG regulations (Special Provision 238).

· **UN "Model Regulation":**

UN 2800 BATTERIES, WET, NON-SPILLABLE, ELECTRIC STORAGE, 8, ENVIRONMENTALLY HAZARDOUS

*

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category E1 Hazardous to the Aquatic Environment

· Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 30, 63, 72

· Regulation (EU) No 649/2012

CAS: 7439-92-1	lead	Annex I Part I
CAS: 1309-60-0	lead dioxide	Annex I Part I
CAS: 7446-14-2	lead sulphate	Annex I Part I

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· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

CAS: 7439-92-1	lead
----------------	------

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

CAS: 7664-93-9	sulphuric acid	Limit value: > 15 - ≤ 40 %	20 - 30%
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· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

CAS: 7664-93-9	sulphuric acid	3
----------------	----------------	---

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

CAS: 7664-93-9	sulphuric acid	3
----------------	----------------	---

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

CAS: 7439-92-1	lead
----------------	------

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

H350i May cause cancer by inhalation.

H360Df May damage the unborn child. Suspected of damaging fertility.

H360FD May damage fertility. May damage the unborn child.

H362 May cause harm to breast-fed children.

H372 Causes damage to organs through prolonged or repeated exposure.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

EUH201 Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

· **Date of previous version:** 28.07.2020

· **Version number of previous version:** 5.00

· **Abbreviations and acronyms:**

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

MARPOL: (from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships

IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

UN: United Nations (also UNO: United Nations Organization)

NOEC: No Observed Effect Concentration

OECD: Organisation for Economic Co-operation and Development

ASTM: American Society for Testing and Materials

WAF: Water Accommodated Fraction

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Carc. 1A: Carcinogenicity – Category 1Ai
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1A: Reproductive toxicity – Category 1A
Repr. 1A: Reproductive toxicity – Category 1A
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

IE



NO.222200817990500



货物运输条件鉴定书

Certification
for Safe Transport of Chemical Goods

非限制性货物

样品名称： 阀控式密闭铅酸蓄电池 GP1272 12V 7.2Ah

Sample Name: Valve Regulated Lead-Acid Rechargeable Battery

委托单位： 希世比能源科技(上海)有限公司
CSB Energy Technology (Shanghai) Co., Ltd.

生产单位： 希世比能源科技(越南)有限公司
CSB Energy Technology (Vietnam) Co., Ltd.



Witness Better Life

SICIT 上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd



货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods

NO. 222200817990500

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样品名称 Sample Name	中文 Chinese	阀控式密闭铅酸蓄电池 GP1272 12V 7.2Ah
	英文 English	Valve Regulated Lead-Acid Rechargeable Battery
委托单位 Consignor	希世比能源科技(上海)有限公司 CSB Energy Technology (Shanghai) Co., Ltd.	
生产单位 Manufacturer	希世比能源科技(越南)有限公司 CSB Energy Technology (Vietnam) Co., Ltd.	
检验方法、程序 Inspection Methods and Procedures	国际海事组织《国际海运危险货物规则》(2020版) IMO International Maritime Dangerous Goods Code (2020 Edition)	
样品外观与气味 Appearance & Odor	黑色塑胶外壳, 无臭 Black Plastics cement shell, Odorless	
IDENTIFICATION 鉴定结论 CONCLUSION	1. 危险性识别 (Hazards identification) 无。 None.	
	2. 海运按照IMO IMDG Code办理类项 (Suggestion according to IMO IMDG Code) 根据特殊规定238, 可按非限制性货物条件办理。 The substance is not subject to IMO IMDG Code according to special provision 238.	
CONCLUSION	3. 包装类别 (Packing Group) 无。 None.	
	检验日期: 2021-12-29 Inspection Date: 签发日期: 2021-12-29 Issue Date: 生效日期: 2022-01-01 Effective Date:	
备注 Comment	无。 None.	

批准
Approver:

王宗

审核
Checker:

董学胜

主检
Appraiser:

俞斌虎

检验检测专用章
(12)

货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods

NO. 222200817990500

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序号 NO	检验项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark
1	振动试验 Vibration test	联合国《关于危险货物运输 的建议书 规章范本》3.3章 特殊规定238(a) UNITED NATIONS Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(a)	合格。 Passed.	合格。 Passed.	/
2	压差试验 Pressure differential test	联合国《关于危险货物运输 的建议书 规章范本》3.3章 特殊规定238(a) UNITED NATIONS Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(a)	合格。 Passed.	合格。 Passed.	/
3	55℃漏液试验 Leakage test at 55℃	联合国《关于危险货物运输 的建议书 规章范本》3.3章 特殊规定238(b) UNITED NATIONS Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations Chapter 3.3 SPECIAL PROVISIONS 238(b)	合格。 Passed.	合格。 Passed.	/
备注 Comment		电池必须具有适当的防短路措施,若是以电池为动力的装置、设备或车辆还须采取有效的防止意外启动措施。The battery must be protected appropriately to prevent a short circuits and any battery powered device, equipment or vehicle must be effectively prepared to prevent unintentional activation.			



货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods

NO. 222200817990500

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报告结束

Shipper
A. HARTRODT DEUTSCHLAND
(GMBH & CO) KG
RECHA-LUEBKE-DAMM 31
20097 HAMBURG
GERMANY

B/L No.
VER285655 - B



SACO SHIPPING LINE LTD

Consigned to order of
A. HARTRODT MEXICO S.A. DE C.V.
RFC: AHM0810275D8
AV. INSURGENTES SUR 800, FLOOR 9
C.P. 03100. CIUDAD DE MEXICO
MEXICO

Notify Party and address
A. HARTRODT MEXICO S.A. DE C.V.
RFC: AHM0810275D8
AV. INSURGENTES SUR 800, FLOOR 9
C.P. 03100. CIUDAD DE MEXICO
MEXICO

SACO SHIPPING LINE LIMITED
44, Kroytser
PANORAMA Residence
Block A, Flat 01
3120 Limassol CYPRUS
FMC Organization No. 025875

6/09/HAM/160703

Copy

		Place of receipt HAMBURG CFS		
Ocean vessel GSL MARIA 635W	Port of loading BREMERHAVEN			
Port of discharge VERACRUZ	Place of delivery VERACRUZ CFS	Freight payable FREIGHT PREPAID	Number of original Bills of Lading 0/ZERO	
Marks and Nos.	Quantity of Goods	Description of Goods	Said to contain	Gross weight, kg. Measurement, m ³
CARGO DETAILS AS PER ATTACHED STATEMENT				

FREIGHT PREPAID - SHIPPED ON BOARD - EXPRESS RELEASE

All particulars above declared by Merchant

For delivery of cargo please apply to:

INTERTEAM, S.A. DE C.V.
SERVICIOS INTERNACIONALS DE
COMERCIO, COLIMA 114 DESPACHO 201,
COLONIA ROMA, C.P. 06700 MEXICO D.F.
TEL:005255146915, FAX:005252087989
DANIELA.BORJA@INTERTEAM.COM.MX

RECEIVED for shipment the above mentioned Goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above.

The Carrier in accordance with the provisions contained on this side and on the reverse side of this document;

- undertakes to perform or to procure the performance of the entire transport from the place at which the Goods are taken in charge to the place designated for delivery in this document, and
- assumes liability as prescribed in this document for such transport.

One of the Bills of Lading to be surrendered duly endorsed in exchange for the Goods or delivery order.

IN WITNESS whereof three (3) original Bills of Lading have been signed, if not otherwise stated above, one of which being accomplished the other(s) to be void.

Place and date of issue
HAMBURG 06.09.2026

Signed on behalf of the Carrier SACO SHIPPING LINE LIMITED

SACO Shipping GmbH
Wollkämmerstraße 1
21107 Hamburg
Germany



As agent only for SACO SHIPPING LINE LIMITED LIMASSOL



Declared Value of the Goods (see clause 12)
US\$
Ad valorem freight paid:

Note:

The Merchant's attention is called to the fact that according to Clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay

Marks and Nos.	Quantity of Goods	Description of Goods	Said to contain	Gross weight, kg.	Measurement, m ³
3001511363	1 CARTON	MEDICAL EQUIPMENT HS CODE: 85072080 S.P. 238		19,260	0,150 - B
STOWED INTO CONTAINER NO.: MRKU4399090				SEAL : B197038	
3001516697	1 CARTON	SAFETY EQUIPMENT HS CODE: 90271010 INCL. IMDG CLASS 8 UN NO. 2796 S.P. 188		0,800	0,012
STOWED INTO CONTAINER NO.: MRSU8991279				SEAL : B199332	
3001516021	1 CARTON	MEDICAL EQUIPMENT HS CODE: 90192090 S.P. 238		16,290	0,082 - B
STOWED INTO CONTAINER NO.: MRKU4399090				SEAL : B197038	
3001519130	2 PALLETS	MEDICAL EQUIPMENT HS CODE: 90192090 S.P. 238		706,000	1,632 - B
STOWED INTO CONTAINER NO.: MRKU4399090				SEAL : B197038	
3001510848	2 PACKAGES	SAFETY EQUIPMENT HS CODE: 90200090, 39269097, 84213925, 84213925, 90279000, 84718000, 90271010, 73269098, 48119000 90319000, 85065010, 90318080 S.P. 188		140,000	1,536 - B
STOWED INTO CONTAINER NO.: MRKU4399090				SEAL : B197038	
TOTAL		7 PACKAGES		882,350 KGS	3,412 CBM



中国认可
检验
INSPECTION
CNAS IB0071



NO.2625020236

SAFETY DATASHEET

Product Name: Rechargeable Lithium Ion Battery
102187 3.7V 1600mAh 5.92Wh

Effective Date: 2025-02-25

Compiler: Xia Baoyue

Checker: Liu Wangping

Approver: Dongxuesheng



Shanghai Institute of Chemical Industry Testing Co., Ltd.



NO.2625020236

NINGBO TIANQI TECHNOLOGY CO.,LTD

SAFETY DATA SHEET

Rechargeable Lithium Ion Battery 102187 3.7V 1600mAh 5.92Wh

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Rechargeable Lithium Ion Battery 102187 3.7V 1600mAh 5.92Wh
Company: NINGBO TIANQI TECHNOLOGY CO.,LTD
Address: No.688 Hengshan West Road, Dagang Industrial Zone, Beilun District, Ningbo,
315800, P.R.China
Email: Shipping@tianqitech.com
Fax: 86-574-86802188
Emergency Phone: 86-574-86802076
Recommend use of the chemical and restrictions on use: /

SDS Number: 2625020236

Effective Date: 2025-02-25

SECTION2 HAZARDS IDENTIFICATION

The product is outside of the scope of GHS system.

Main Hazards:

Fire or Explosion Hazards:

Lithium ion battery contains flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (>150℃), when damaged or abused (e.g., mechanical damage or electrical overcharging). May burn rapidly with flare-burning effect. May ignite other batteries in close proximity.

Health Hazards:

Contact with the electrolyte of battery may be irritating to skin, eyes and mucous membranes. Fire will produce irritating, corrosive and/or toxic gases. Fumes may cause dizziness or suffocation.

SECTION3 INFORMATION ON INGREDIENTS

Product name: Rechargeable Lithium Ion Battery 102187 3.7V 1600mAh 5.92Wh

Ingredient	Concentration	CAS No.	EC No.
Cobalt lithium dioxide	40-45%	12190-79-3	235-362-0

NO.2625020236

Graphite	20-25%	7782-42-5	231-955-3
Electrolyte	13-18%	21324-40-3	244-334-7
Copper foil	5-8%	7440-50-8	231-159-6
Aluminium foil	4-8%	7429-90-5	231-072-3
Diaphragm	2-5%	9002-88-4	618-339-3
Aluminium plastic film	2-3%	9003-07-0/7429-90-5/2618-352-4/231-072	
Conductive agent	0.5-1%	4937-16-4	-3/607-456-5
		7440-44-0	231-153-3

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If in contact with the internal materials of battery, remove the contaminated clothing, shoes and socks, immediately flush with plenty of water for at least 20 minutes. Call a physician.

Eye Exposure:

If in contact with the internal materials of battery, lift your eyelids immediately and rinse them with running water for more than 20 minutes. Call a physician.

Inhalation Exposure:

If the internal materials of battery are inhaled, immediately remove to fresh air. If breathing is difficult give oxygen. If not breathing, give artificial respiration. Call a physician.

Oral Exposure:

Do not induce vomiting if the internal materials of battery are swallowed. Call a physician immediately.

Most Important Symptoms/Effects, Acute and Delayed:

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary:

No data available.

SECTIONS FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Suitable:Water spray or regular foam.

Specific Hazards Arising from the Chemical:

May decompose upon combustion to generate irritating, corrosive or toxic fumes. Fumes may cause dizziness or suffocation.

Special Protective Action for Fire-fighters:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fire-extinguishing work is done from the windward. Uninvolved persons should evacuate to a safe place.

SECTION6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Entry to noninvolved personnel should be controlled around the leakage area by roping off.Remove all sources of ignition.

Environmental Precautions:

Avoid leakage getting into the earth, ditches or waters.Avoid directly releasing the washing waste-water into the environment.

NO.2625020236

Methods and Materials for Containment and Cleaning up:

If the electrolyte leaks, use soil, sand or other non-combustible materials to absorb. The leaked batteries and dirty adsorbents should be placed in metal containers.

SECTION7 HANDLING AND STORAGE**Precautions for Safe Handling:**

Operators should be trained and strictly abide by operating procedures. Wear appropriate protective clothing and safety gloves. Keep away from ignition sources, heat and flame. No smoking at working site. Handling is performed in a well ventilated place. Avoid disassembling the battery at will and reversing battery polarity within the battery assembly. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. If the electrolyte leaks, avoid directly contacting with eyes and skin. Avoid inhalation. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in a cool, dry, and well-ventilated area. Keep away from ignition sources, heat and flame. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

SECTION8 EXPOSURE CONTROL/PPE**Control Parameters:**

GBZ 2.1-2019 Occupational Exposure Limits for Hazardous Agents in the Workplace - Part 1: Chemical Hazardous Agents:

Cobalt and compounds, as Co: PC-TWA 0.05 mg/m³; PC-STEL 0.1 mg/m³, G2B, Sensitization

Graphite dust: PC-TWA 4 mg/m³ (Total dust); PC-TWA 2 mg/m³ (Respirable dust)

Copper (calculated as Cu): Copper dust PC-TWA 1 mg/m³; Copper smoke PC-TWA 0.2 mg/m³

Aluminum metal, aluminum alloy dust: PC-TWA 3 mg/m³ (Total dust)

Diaphragm: Polyethylene dust: PC-TWA 5mg/m³ (Total dust)

Aluminium plastic film: Polypropylene dust: PC-TWA 5 mg/m³ (Total dust)

ACGIH:

Graphite: TLV-TWA 2 mg/m³

Copper: TLV-TWA 1 mg (Cu) /m³ Dust, smoke; TLV-TWA 0.2 mg (Cu) /m³ Smoke

Aluminum: TLV-TWA 1 mg/m³

Appropriate Engineering Controls:

Mechanical exhaust required. Safety shower and eye bath.

Individual Protection Measures:**Eye/Face Protection:**

Wear chemical safety glasses if needed.

Skin Protection:

Hand Protection: Wear safety gloves.

Body Protection: Wear appropriate protective clothing.

Respiratory Protection:

Wear government approved respirator if needed.

Thermal Hazards:

No data available.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

NO.2625020236

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

Appearance: Blue plastic film shell
 Odor: Odorless
 pH Value: 8-9
 Solubility: Partial soluble in water
 Boiling Point, No data available
 Initial Boiling
 Point and Boiling
 Range:
 Melting >300°C
 Point/Freezing
 Point:
 Flash Point No data available
 (Closed Cup):
 Density/Relative No data available
 Density:
 Kinematic No data available
 Viscosity:
 Lower/Upper No data available
 Explosion
 Limit/Flammabili
 ty Limit:
 Vapour Pressure: No data available

 Relative Vapor No data available
 Density:
 Partition No data available
 Coefficient
 N-Octanol/Water(
 Log Value):
 Autoignition No data available
 Temperature:
 Decomposition No data available
 Temperature:
 Particle No data available
 Characteristics:

 Flammability No data available
 (Solid, Gas):

SECTION10 STABILITY AND REACTIVITY

Reactivity:
 No data available.
 Chemical Stability:
 Stable under normal temperatures and pressures.
 Possibility of Hazardous Reactions:
 No data available.
 Conditions to Avoid:
 Avoid misoperation, exposure to heat and open flame. Avoid mechanical or electrical abuse and overcharge.
 Prevent short circuits and short circuits caused by movement.
 Incompatible Materials:
 Strong oxidizing agents, combustible materials and corrosives.
 Hazardous Decomposition Products:
 Carbon oxides, metal oxides, etc.

NO.2625020236

SECTION11 TOXICOLOGICAL INFORMATION**Acute Toxicity:**

No data available.

Skin Corrosion/Irritation:

The electrolyte in the battery causes skin irritation.

Serious Eye Damage/Irritation:

The electrolyte in the battery causes eye irritation.

Respiratory Sensitization:

No data available.

Carcinogenicity:

No data available.

Skin Sensitization:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Specific Target Organ Toxicity -Single Exposure:

No data available.

Specific Target Organ Toxicity -Repeated Exposure:

No data available.

Aspiration Hazard:

No data available.

SECTION12 ECOLOGICAL INFORMATION**Toxicity:**

No data available.

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION13 DISPOSAL CONSIDERATION**Disposal Methods:**

The disposal of discarded battery shall comply with the requirements of relevant laws, regulations, policies and standards such as the "Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste" and "Technical Policy for the Prevention and Control of Waste Battery Pollution". Contact a licensed professional waste disposal service to dispose of wastes. Used battery being transported for disposal or reclamation should be carefully checked prior to shipment to ensure the integrity of each battery and its suitability for transport.

SECTION14 TRANSPORT INFORMATION

NO.2625020236

**Lithium Battery
Contained in
HELMETS during
Transport:**

The product has passed the test items of Manual of Tests and Criteria Section UN 38.3.
The total net weight of the lithium batteries is less than 5 kg.

**RID/ADR (2023
Edition) :**

The product is not subject to the other provisions of RID/ADR according to special provision 188.

According to 2.2.9.1.7(g), Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

**IATA DGR (66th
Edition) :**

The product shall meet the General Requirements and section II of Packaging Instruction 967.

The package must be capable of withstanding the stacking test required in PI 967-II.
According to 3.9.2.6.1(g) , Manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

**IMO IMDG CODE
(2022 Edition) :**

The product is not subject to the other provisions of IMO IMDG CODE according to special provision 188.

According to 2.9.4.7, Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

SECTION15 REGULATORY INFORMATION

Domestic Regulations:

Lithium Battery Contained in the Equipment during Transport:

Regulations Concerning Road Transportation of Dangerous Goods (JT/T 617-2018) :

UN Number: UN3481

Name and Description: Lithium ion batteries contained in equipment

The product has passed the test items of Manual of Tests and Criteria Section 38.3.

The product is not subject to JT/T 617-2018 according to special provision 188.

List of Dangerous Goods (GB 12268-2012) :

UN Number: UN3481

Shipping Name: Lithium ion batteries contained in equipment

Packing Group: II

The product has passed the test items of Manual of Tests and Criteria Section 38.3.

The product is not subject to GB 12268-2012 according to special provision 188.

List of Dangerous Goods by Rail(TB/T 30006-2022):

Number: 91046

Name of Product: Lithium ion batteries contained in equipment

The product has passed the test items of Manual of Tests and Criteria Section 38.3.

The product is not subject to TB/T 30006-2022 according to special provision 78, 79.

International Regulations:

Directive (EU) 2023/1542 and 2013/56/EU:

The label, disposal and recycling of the battery shall meet the requirements of EU Directive (EU) 2023/1542 and 2013/56/EU.

NO.2625020236

ICAO TI:

1. Unless be exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480, PI 965) and lithium metal cell/batteries (UN 3090, PI 968) are forbidden for carriage on passenger aircraft.
2. Unless be approved according to ICAO TI, Lithium ion cells/batteries (UN 3480, PI 965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.

SECTION16 OTHER INFORMATION**Preparation Date:**

2025-02-25

Preparation Department:

Shanghai Institute of Chemical Industry Testing Co., Ltd.

Tel(Fax):+86-21-52815377/31765555

Revision:

0

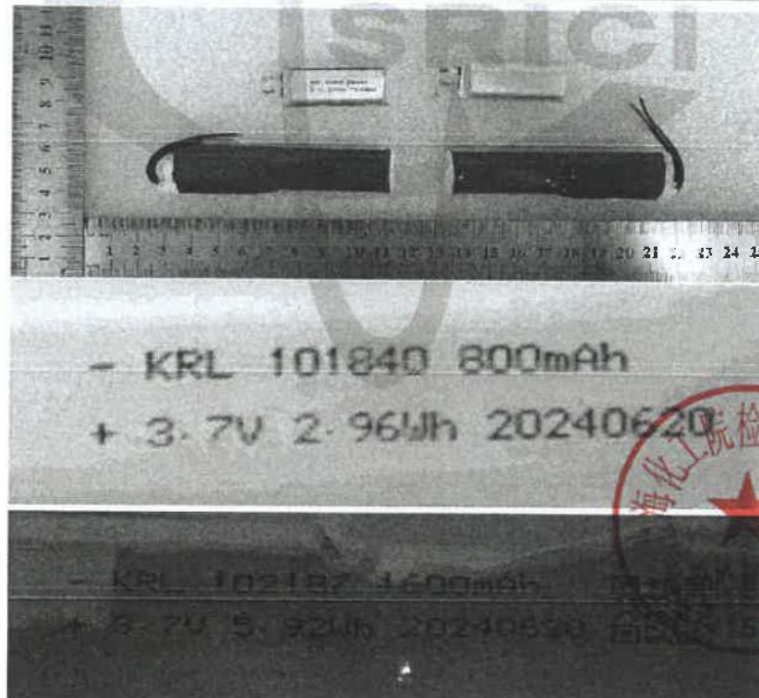
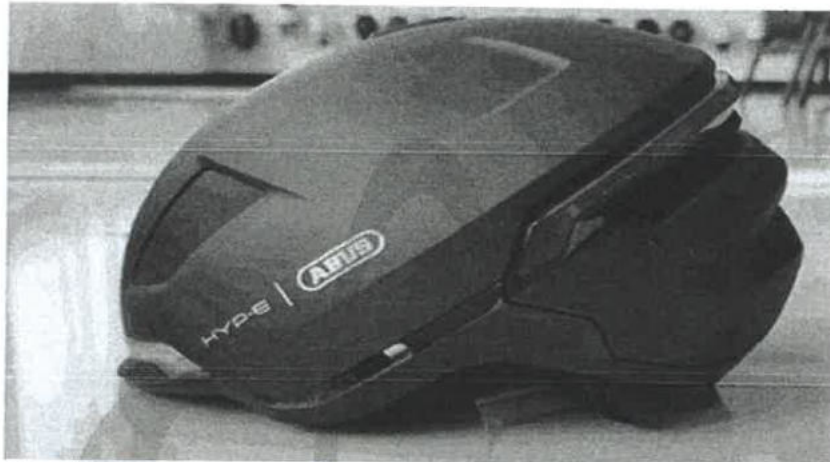
Abbreviations and Acronyms:

CAS: Chemical Abstracts Service EC: European Commission ACGIH: American Conference of Governmental Industrial Hygienists PC-TWA: Permissible concentration-time weighted average PC-STEL: Permissible concentration-short term exposure limit TLV-TWA: Time weighted average threshold limit G2B: Possibly carcinogenic to humans Sensitization: The substance may have allergenic effects ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road RID: Regulations concerning the International Carriage of Dangerous Goods by Rail IMD CODE: International Maritime Organization International Maritime Code for Dangerous Goods EmS: Emergency schedule IATA DGR: International Air Transport Association Dangerous Goods Regulations EU: European Union ICAO TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air PI:Packaging Instruction

Other Information:

This SDS is only compiled for battery and based on the information such as ingredients provided by the applicant and our current knowledge. This SDS shall be used only as a guide. If the battery is used as a component in another product, the information in this SDS may not be applicable. The users of this SDS must make independent judgments on the correctness and completeness and then decide its suitability according to the actual situation. The users should take the relevant legal responsibilities for the consequences of use.

NO.2625020236



END OF REPORT

Shipper
QCS-QUICK CARGO SERVICE GMBH
WERNER-WITT-STRASSE 5
21035 HAMBURG, GERMANY
TAX-ID:DE114202533
TELEPHONE: 00494023838940

B/L No.
VER285795



SACO SHIPPING LINE LTD

SACO SHIPPING LINE LIMITED

44, Kroytser
PANORAMA Residence
Block A, Flat 01
3120 Limassol CYPRUS
FMC Organization No. 025875

6/09/HAM/160719

Copy

Consigned to order of

AIRMAR TRANSPORTES INTERNACIONALES,
SA DE CV,RFC:AT19307029F8
NORTE 174,NO. 549,COL. PENSADOR
MEXICANO, VENUSTIANO CARRANZA,C.P.
15510.CIUDAD DE MEXICO, MEXICO
MAYRA MUNOZ TRAFICO.MTY@AIRMAR.COM.MX
TEL.52 55 1999 9000

Notify Party and address

AIRMAR TRANSPORTES INTERNACIONALES,
SA DE CV,RFC:AT19307029F8
NORTE 174,NO. 549,COL. PENSADOR
MEXICANO, VENUSTIANO CARRANZA,C.P.
15510.CIUDAD DE MEXICO, MEXICO
MAYRA MUNOZ TRAFICO.MTY@AIRMAR.COM.MX
TEL.52 55 1999 9000

Place of receipt

HAMBURG CFS

Ocean vessel

GSL MARIA 635W

Port of loading

BREMERHAVEN

Port of discharge

VERACRUZ

Place of delivery

VERACRUZ CFS

Freight payable

VERACRUZ

Number of original Bills of Lading

0/ZERO

Marks and Nos.

Quantity of Goods

Description of Goods

Said to contain

Gross weight, kg.

Measurement, m³

CARGO DETAILS AS PER ATTACHED STATEMENT

FREIGHT COLLECT - SHIPPED ON BOARD - EXPRESS RELEASE

All particulars above declared by Merchant

For delivery of cargo please apply to:

INTERTEAM, S.A. DE C.V.
SERVICIOS INTERNACIONALS DE
COMERCIO, COLIMA 114 DESPACHO 201,
COLONIA ROMA,C.P. 06700 MEXICO D.F.
TEL:005255146915,FAX:005252087989
DANIELA.BORJA@INTERTEAM.COM.MX

Declared Value of the Goods (see clause 12)

US\$

Ad valorem freight paid:

Note:

The Merchant's attention is called to the fact that according to Clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay

RECEIVED for shipment the above mentioned Goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above.

The Carrier in accordance with the provisions contained on this side and on the reverse side of this document;

- undertakes to perform or to procure the performance of the entire transport from the place at which the Goods are taken in charge to the place designated for delivery in this document, and
- assumes liability as prescribed in this document for such transport.

One of the Bills of Lading to be surrendered duly endorsed in exchange for the Goods or delivery order.

IN WITNESS whereof three (3) original Bills of Lading have been signed, if not otherwise stated above, one of which being accomplished the other(s) to be void.

Place and date of issue

HAMBURG 06.09.2026

Signed on behalf of the Carrier SACO SHIPPING LINE LIMITED

SACO Shipping GmbH
Wolkämmerstraße 1
21107 Hamburg
Germany



As agent only for SACO SHIPPING LINE LIMITED LIMASSOL



Marks and Nos.	Quantity of Goods	Description of Goods	Said to contain	Gross weight, kg.	Measurement, m ³
ABUS AUGUST BREMICKER SOHNE KG BICYCLE VISION STORE SA DE CV	16 PALLETS	BIKE HELMETS AND REAR LIGHTS AS PER CUSTOMS INVOICE: 1007628, 1007629, 1007631, 1007774, 1017437, 1017438, 1035695, 1062526, 1113058, 113060, 1113061, 1113062, 1113063, 1113064, 1113065, 1113066, 1113067, 1113068, 1113069, 1113070, 1113071, 1113072, 1113073, 1113074, 1113075, 1113076, 1113078, 1113079, 1130322, 1147735, 1180098, 1191542, 1194841, 1222244, 1222245, 1242307, 1249940, 1261853, 1261854, 1285560, 1285561, 1285562, 1285923, 1309796, 1344850, 1355870, 1355871, 1355872, 1355873, 1396637, 1261850, 1261852, 1355869, 1355874 HS CODES: 650610, 610910, 420292, 611020, 610990, 570339, 830140, 830170		723,436	20,640
STOWED INTO CONTAINER NO.: MRKU4399090				SEAL : B197038	
TOTAL	16 PALLETS			723,436 KGS	20,640 CBM

PRODUCT SAFETY DATA SHEET

The batteries are exempt articles and are not subject to the OSHA Hazard Communication Standard Requirement. This sheet is provided as technical information only. The information and recommendations set forth are made in good faith and are believed to be accurate as of the date of preparation. However, Mitsubishi Electric Home Appliance Co., Ltd. makes no warranty expressed or Implied.

Section 1 Product and Company Identification

Product Name	: Lithium Manganese Dioxide Batteries
Type No	: CR2032
Volts	: 3V
Date of preparation	: September 10, 2009
CHEMICAL SYSTEM	: Lithium Manganese Dioxide
Approximate Weight	: 3.2g
Designed for Recharge	: NO
Company	: Mitsubishi Electric Home Appliance Co.,Ltd.
Address	: 1-1-1, Yamate, Funabashi, Chiba Pref. 273-0045 Japan
Telephone Numbers	: +81- 47 - 435 - 7641
Fax Numbers	: +81- 47 - 435 - 3932

Section 2 Composition/Information on Ingredients

Ingredient	CAS NO.	Content (wt%)
Lithium	7439-93-2	2.0
Propylene Carbonate	108-32-7	6.1
Manganese dioxide	1313-13-9	29
1,2-Dimethoxyethane	110-71-4	4.2
Lithium perchlorate	7791-03-9	0.9
Graphite	7782-42-5 1333-86-4	3.4
Polypropylene	9003-07-0	0.30

Section 3 Hazards Identification

This contains lithium, organic solvent, and other combustible materials. For this reason, Improper handling of the battery could lead to distortion, leakage*, overheating, explosion of fire and cause human injury or equipment trouble. Please strictly observe safety instruction.

(*Leakage is defined as an unintended escape of liquid from a battery.)

Section 4 First Aid Measures

None unless internal materials exposure. If contents are leaked out, observe following Instructions

Inhalation	Fumes can cause respiratory irritation. Remove to fresh air and consult a physician.
Skin	Immediately flush skin plenty of water. If itch or irritation by chemical burn persists, consult a physician.
Eyes	Immediately flush eye with plenty of water for at least 15 minutes. Consult a physician immediately.
Ingestion	If swallowing a battery, consult a physician immediately. If contents come into mouth, immediately rinse by plenty of water and consult a physician.

Section 5 Fire Fighting Measures

Extinguishing Media	Extinguisher of alkaline metal fire is effective. Plenty of cold water is also effective to cool the surrounding area and control the spread fire. But hydrogen gas may be evolved by the reaction of water and lithium and it can form an explosive mixture. Therefore in the case that lots of lithium batteries are burning in a confined space, use a smothering agent.
Fire fighting procedure	Use self-contained breathing apparatus and full protective gear not to inhale harmful gas.

Section 6 Accidental Release Measures

Individual is in conformity with the precautions: Can't dismantle, flatten, short out, heat, pile up battery, etc.

Environmental precautions : Can't heat and put the battery into the fire, can't place on very moist place.

Clear up the method : Can't pile up and deal with in a large amount, can't put into the fire, other can deal with according to the routine

Section 7 Handling and Storage

1) Handling

Never swallow. Never reverse the positive and negative terminals when mounting. Never short-circuit the battery. Never heat. Never expose to open flame. Never disassemble. Never weld the terminal or wire to the body of the battery directly. Never touch the liquid leaked out of battery. Never bring fire close to battery liquid. Never keep in touch with battery.

2) Storage

Never let the battery contact with water. Never store the battery in hot and high humid place. Don't push the battery excessively and destroy the battery packaging, often wet and ventilating the dry place to keep in the normal atmospheric temperature, find the unusual battery is dealt with in time

Section 8 Exposure Controls, Personal Protection

Respiratory Protection		: NA
Ventilation	Local Exhaust	: NA
	Mechanical	: NA
	Special	: NA
	Other	: NA
Eye Protection		: NA
Protective Gloves		: NA
Other protective clothing		: NA

Section 9 Physical/Chemical Characteristics

State of matter	:	Solid state
Form	:	Button type
Color	:	True quality of stainless steel
Smell	:	Tasteless (At the time of the fullness)
Hydrogen ion index	:	NA
Boiling point	:	NA
Resolve temperature	:	NA
Flash point	:	NA
Method of testing	:	(NA)Open the cup (NA)Close the cup
Spontaneous combustion temperature	:	NA
Explosion demarcation line	:	Higher than 170 degrees Centigrade of batterierising will be burnt
The vapour is pressed	:	NA
The density of vapour	:	NA
To the density (Water =1)	:	NA
Dissolving	:	NA

Section 10 Stability and Reactivity

Stability	Stable
Incompatibility	Water
Hazardous polymerization	Will not occur.
Condition to avoid	See section 7.
Hazardous Decomposition or Byproducts	Hydrogen

Section 11 Toxicological Information

Urgent toxicity : Suck : ——

Skin : ——

Eyes : ——

LD50 (test animals, absorb the way) : ——

LC50 (test animals, absorb the way) : ——

Some effect : ——

Cause the sensitiveness : ——

Slow toxicity or long-term toxicity : ——

Special effect : ——

Section 12 Ecological Information

Possible environmental impact / environment : ——

Section 13 Disposal condition

Discard the method of handling: After the used battery is put for 10 days in water of the rate of certain conductance had, can press general garbage disposal.

Section 14 Transportation Information

Shipping Name	Lithium Batteries
UN Number	UN3090 (UN3091 for lithium batteries in equipment)
Hazard Classification	Class 9 (Miscellaneous)

Organizations governing the transport of lithium batteries

Area	Method	Organization	Special Provision
International	Air	IATA, ICAO	Packing Instruction 968-970
International	Marine	IMO	SP188
U.S.A	Air, Rail, Road, Marine	DOT	49 CFR Section 173.185

Their regulations are based on the UN Recommendations. Each special provision provides specifications on exceptions and packaging for shipping lithium batteries. All CR batteries of Mitsubishi meet all special provisions.

Ref) Summary of Packing Instruction (IATA Dangerous Goods Regulations 50th Edition)

- 1) Lithium weight or equivalent lithium content must be less than value in table.

	Lithium Cell/Battery (Lithium weight)
Cell	1g or less
Battery	2g or less

*Equivalent lithium content (g) is calculated as 0.3(g/Ah) times the rated capacity (Ah).

- 2) Each cell or battery is of the type proven to meet the requirement of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3.
- 3) Each package must be displayed a battery handling label. (Telephone number must be printed for emergency call on the handling label.)
- 4) Each consignment must be accompanied with a declaration of non-dangerous goods document. (Telephone number must be printed for emergency call on the document.)
- 5) Each package must be capable of withstanding a 1.2 m drop test.

Mitsubishi will offer the certificate of 1) and 2). If our package is used for transport, we offer the certificate of 5).

- a) Transportation of batteries installed in equipment as non-restricted goods

If each package contains no more than 4 cells or 2 batteries, the requirement is the same as current. But for other cases of cell or battery quantity, the requirements are 1), 2), 3) and 4).

- b) Transport of batteries packed with equipment as non-restricted goods

Regardless of the battery quantity, the requirements 1) to 5) shall be satisfied.

Also the battery quantity within one package is restricted in air transport to the minimum quantity to operate the application and 2 batteries as spares.

- c) Transportation of batteries only as non-restricted goods Regardless of the battery quantity, the requirements 1) to 5) shall be satisfied.

Also the maximum weight of one package is restricted in air transport, 2.5kg or less for lithium metal cells or batteries.

Section 15 Regulatory Information

Use the regulation : «Original battery The 4th part : Security demand for the lithium battery»

GB 8897.4-2002

Section 16 Other Information

Note : (1) The symbol in above-mentioned materials "—" " " representative consult at present it materials not relevant, but symbol "NA" represent field the getting more suitable for material.

- (2) If you want further information, please contact :

Manager of Quality Assurance Section

Masashi Sugita

1-1-1, Yamate, Funabashi, Chiba Pref. 273-0045 Japan

Tel: +81- 47 - 435 - 7641

Fax: +81- 47 - 435 - 3932

No.2021-011002

Lithium Battery Test Summary/UN38.3

Manufacturer/Seller MITSUBISHI ELECTRIC HOME APPLIANCE CO.,LTD.
BATTERY DEPARTMENT

Address 3-12 Shiohama, Ichikawa, Chiba Pref. 272-0127 Japan

Telephone +81-47-712-7500

e-mail ln-kandenchi-info@lnet.mellife.co.jp

URL <http://www.mitsubishielectric.co.jp/home/denchi/>

Test Laboratory Shanghai Research Institute of Chemical Industry Testing Center

Address No.345 East Yunling Road, Putuo, Shanghai, China 200062

Telephone +86-21-31765555

e-mail battery@ghs.cn

URL www.ghs.cn

Specifications Designation CR2032

Brand MITSUBISHI ELECTRIC

Description Primary Lithum metal cell

Physical description Non-rechargeable.Coin

Model Number CR2032E+

Nominal Voltage 3V

Product mass 3.0g

Nominal Capacity 220mAh

Lithum Content 0.062g

Country of origin China

Test Information

Test report No. 1120100410

Date of test report 2020-11-23

Test standard ST/SG/AC.10/11/Rev.6 Amend.1 38.3

UNITED NATIONS "Recommendations on the TRANSPORT
OF DANGEROUS GOODS" Manual of Tests and Criteria
ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3

Test Items	Result	Note
T.1 ALTITUDE SIMULATION	Pass	---
T.2 THERMAL TEST	Pass	---
T.3 VIBRATION	Pass	---
T.4 SHOCK	Pass	---
T.5 EXTERNAL SHORT CIRCUIT	Pass	---
T.6 CRUSH	Pass	---
T.7 OVERCHARGE	-	Not applicable
T.8 FORCED DISCHARGE	Pass	---

Signature: 

Masashi Sugita / Manager

CUSTOMER SATISFACTION & TECHNICAL & QUALITY ASSURANCE SECTION
BATTERY DEPARTMENT

Shipper
GEIS AIR & SEA GMBH
MATTENTWIETE 8
D-20457 HAMBURGO/ALEMANIA
TAX-ID DE314559060

B/L No.
VER285824



SACO SHIPPING LINE LTD

SACO SHIPPING LINE LIMITED
44, Kroytser
PANORAMA Residence
Block A, Flat 01
3120 Limassol CYPRUS
FMC Organization No. 025875

6/09/HAM/160732

Copy

Consigned to order of
SEA CARGO LOGISTICS S.A. DE C.V.
TAX ID SCL090414QE0
LEIBNITZ 117, COL. ANZURES
C.P. 11590,CDMX, MIGUEL HIDALGO,MX
ARELI.HUERTA@SEACARGO.COM
OPERACIONES.NETWOR@SEACARGO.COM

Notify Party and address
SEA CARGO LOGISTICS S.A. DE C.V.
TAX ID SCL090414QE0
LEIBNITZ 117, COL. ANZURES
C.P. 11590,CDMX, MIGUEL HIDALGO,MX
ARELI.HUERTA@SEACARGO.COM
OPERACIONES.NETWOR@SEACARGO.COM

		Place of receipt HAMBURG CFS	
Ocean vessel GSL MARIA 635W		Port of loading BREMERHAVEN	
Port of discharge VERACRUZ		Place of delivery VERACRUZ CFS	Freight payable VERACRUZ
			Number of original Bills of Lading 0/ZERO
Marks and Nos. AUTOMATIZCION TRAFICO ALTO S.A. DE C.V., ADDRESS, NO. 1-3	Quantity of Goods 3 PACKAGES	Description of Goods S.L.A.C. ARTICULOS DE SEGURIDAD - UNDER SP188 H.S. CODES: 8530.8000, 8517.6920, 8471.5000, 4415.1010	Said to contain Gross weight, kg. 577,000 Measurement, m ³ 4,752

STOWED INTO CONTAINER NO.: MRKU4399090

SEAL : B197038

TOTAL **3 PACKAGES** **577,000 KGS** **4,752 CBM**

FREIGHT COLLECT - SHIPPED ON BOARD - EXPRESS RELEASE

All particulars above declared by Merchant

For delivery of cargo please apply to:

INTERTEAM, S.A. DE C.V.
SERVICIOS INTERNACIONALS DE
COMERCIO, COLIMA 114 DESPACHO 201,
COLONIA ROMA,C.P. 06700 MEXICO D.F.
TEL:005255146915,FAX:005252087989
DANIELA.BORJA@INTERTEAM.COM.MX

RECEIVED for shipment the above mentioned Goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above.

The Carrier in accordance with the provisions contained on this side and on the reverse side of this document;

- undertakes to perform or to procure the performance of the entire transport from the place at which the Goods are taken in charge to the place designated for delivery in this document, and
- assumes liability as prescribed in this document for such transport.

One of the Bills of Lading to be surrendered duly endorsed in exchange for the Goods or delivery order.

IN WITNESS whereof three (3) original Bills of Lading have been signed, if not otherwise stated above, one of which being accomplished the other(s) to be void.

Place and date of issue
HAMBURG 06.09.2026

Signed on behalf of the Carrier SACO SHIPPING LINE LIMITED

SACO Shipping GmbH
Wollkämmerstraße 1
21107 Hamburg
Germany



As agent only for SACO SHIPPING LINE LIMITED LIMASSOL



Declared Value of the Goods (see clause 12)
US\$
Ad valorem freight paid:

Note:

The Merchant's attention is called to the fact that according to Clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay

Shipper
FIVE STAR GLOBAL LOGISTICS GMBH
NIENDORFER STRASSE 170
22848 NORDERSTEDT
GERMANY
DE165917795

B/L No.
VER285839



SACO SHIPPING LINE LTD

Consigned to order of
FS HAMBURGO GLOBAL CARGA SAPI DE CV
AV. INSURGENTES SUR 863 PISO 7
OFNA. 718 COL. NAPOLES
03810 CD. DE MEXICO
TAX ID: BAM2106075G9

SACO SHIPPING LINE LIMITED
44, Kroytser
PANORAMA Residence
Block A, Flat 01
3120 Limassol CYPRUS
FMC Organization No. 025875

6/09/HAM/160735

Copy

Notify Party and address
FS HAMBURGO GLOBAL CARGA SAPI DE CV
AV. INSURGENTES SUR 863 PISO 7
OFNA. 718 COL. NAPOLES
03810 CD. DE MEXICO
TAX ID: BAM2106075G9

		Place of receipt		
		HAMBURG CFS		
Ocean vessel			Port of loading	
GSL MARIA 635W			BREMERHAVEN	
Port of discharge			Place of delivery	
VERACRUZ			VERACRUZ CFS	
		Freight payable	Number of original Bills of Lading	
		VERACRUZ	0/ZERO	

Marks and Nos.	Quantity of Goods	Description of Goods	Said to contain	Gross weight, kg.	Measurement, m ³
BRAND PRECISION MEXICO	22 PALLETS	S.T.C. SPRINGS HS: 73202081		14627,000	16,051

STOWED INTO CONTAINER NO.: MRKU4399090

SEAL : B197038

TOTAL **22 PALLETS** **14627,000 KGS** **16,051 CBM**

FREIGHT COLLECT - SHIPPED ON BOARD - EXPRESS RELEASE

All particulars above declared by Merchant

For delivery of cargo please apply to:

INTERTEAM, S.A. DE C.V.
SERVICIOS INTERNACIONALS DE
COMERCIO, COLIMA 114 DESPACHO 201,
COLONIA ROMA, C.P. 06700 MEXICO D.F.
TEL:005255146915, FAX:005252087989
DANIELA.BORJA@INTERTEAM.COM.MX

RECEIVED for shipment the above mentioned Goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above.

The Carrier in accordance with the provisions contained on this side and on the reverse side of this document;

- undertakes to perform or to procure the performance of the entire transport from the place at which the Goods are taken in charge to the place designated for delivery in this document, and
- assumes liability as prescribed in this document for such transport.

One of the Bills of Lading to be surrendered duly endorsed in exchange for the Goods or delivery order.

IN WITNESS whereof three (3) original Bills of Lading have been signed, if not otherwise stated above, one of which being accomplished the other(s) to be void.

Place and date of issue

HAMBURG 06.09.2026

Signed on behalf of the Carrier SACO SHIPPING LINE LIMITED

SACO Shipping GmbH
Wollkämmerstraße 1
21107 Hamburg
Germany



As agent only for SACO SHIPPING LINE LIMITED LIMASSOL



Declared Value of the Goods (see clause 12)
US\$
Ad valorem freight paid:

Note:

The Merchant's attention is called to the fact that according to Clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay

Shipper
BDP INTERNATIONAL GMBH
HEIDENKAMPSWEG 99
20097 HAMBURG
GERMANY

B/L No.
VER285877



SACO SHIPPING LINE LTD

SACO SHIPPING LINE LIMITED

44, Kroytser
PANORAMA Residence
Block A, Flat 01
3120 Limassol CYPRUS
FMC Organization No. 025875

6/09/HAM/160757

Copy

Consigned to order of
ED FORWARDING SAPI DE CV
AV INSURGENTES NO.1602
PISO 7 OFICINA 702 BIS
COL. CREDITO CONSTRUCTOR
DEL BENITO JUAREZ CP. 03940
RFC: EFO140714JPA

Notify Party and address
ED FORWARDING SAPI DE CV
AV INSURGENTES NO.1602
PISO 7 OFICINA 702 BIS
COL. CREDITO CONSTRUCTOR
DEL BENITO JUAREZ CP. 03940

		Place of receipt	
		GELSENKIRCHEN, GERMANY	
Ocean vessel		Port of loading	
GSL MARIA 635W		BREMERHAVEN, GERMANY	
Port of discharge		Place of delivery	Freight payable
VERACRUZ, MEXICO		VERACRUZ CFS	HAMBURG
			Number of original Bills of Lading
			0/ZERO

Marks and Nos.	Quantity of Goods	Description of Goods	Said to contain	Gross weight, kg.	Measurement, m ³
CCL DESIGN MEXICO	2 PACKAGES	LOADED ONTO 2 PALLETS LOADED INTO 1 LCL SCREEN PRINTING FRAME HS-NO 76101000 **HSCODE: 76101000**		440,000	3,837

STOWED INTO CONTAINER NO.: MRKU4399090

SEAL : B197038

TOTAL	2 PACKAGES	440,000 KGS	3,837 CBM
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FREIGHT PREPAID - SHIPPED ON BOARD - EXPRESS RELEASE

All particulars above declared by Merchant

For delivery of cargo please apply to:

INTERTEAM, S.A. DE C.V.
SERVICIOS INTERNACIONALS DE
COMERCIO, COLIMA 114 DESPACHO 201,
COLONIA ROMA, C.P. 06700 MEXICO D.F.
TEL:005255146915, FAX:005252087989
DANIELA.BORJA@INTERTEAM.COM.MX

Declared Value of the Goods (see clause 12)
US\$
Ad valorem freight paid:

Note:

The Merchant's attention is called to the fact that according to Clauses 11 to 13 of this Bill of Lading, the liability of the Carrier is, in most cases, limited in respect of loss of or damage to the goods and delay

RECEIVED for shipment the above mentioned Goods in apparent good order and condition as far as could be ascertained by exercising reasonable means of checking or as stated above.

The Carrier in accordance with the provisions contained on this side and on the reverse side of this document;

- undertakes to perform or to procure the performance of the entire transport from the place at which the Goods are taken in charge to the place designated for delivery in this document, and
- assumes liability as prescribed in this document for such transport.

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IN WITNESS whereof three (3) original Bills of Lading have been signed, if not otherwise stated above, one of which being accomplished the other(s) to be void.

Place and date of issue
HAMBURG 06.09.2026

Signed on behalf of the Carrier SACO SHIPPING LINE LIMITED

SACO Shipping GmbH
Wollkämmerstraße 1
21107 Hamburg
Germany



As agent only for SACO SHIPPING LINE LIMITED LIMASSOL

