

Batterypack - Dangerous Good according to UN3480



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Issue date: 3/23/2018 Revision date: 1/21/2021

Supersedes: 6/2/2020

Version: 1.5

SDS No: 11728-0001

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

1.1. Product identifier

Product form : Article
Trade name : Batterypack - Dangerous Good according to UN3480
Other means of identification :

Handelsname	Sachnummer	technische Daten	L*B*H (mm)	Gewicht (kg)
Battery Pack Frame black 400Wh	0275.007.503	36Vx40, 11 Ah, 400 Wh	300*100*95	2,6
Battery Pack Frame white 400Wh	0275.007.504	36Vx40, 11 Ah, 400 Wh	300*100*95	2,6
Battery Pack Rack black 400Wh	0275.007.505	36Vx40, 11 Ah, 400 Wh	370*75*120	2,6
PowerPack 400 Frame anthracite	0275.007.512	36Vx40, 11 Ah, 400 Wh	320*90*90	2,4
PowerPack 400 US Frame anthracite	0275.007.524	36Vx40, 11 Ah, 400 Wh	320*90*90	2,4
PowerPack 500 Frame anthracite	0275.007.530	36Vx40, 13,4 Ah, 500 Wh	320*90*90	2,6
PowerPack 400 Rack anthracite	0275.007.522	36Vx40, 11 Ah, 400 Wh	370*122*76	2,6
PowerPack 400 US Rack anthracite	0275.007.525	36Vx40, 11 Ah, 400 Wh	370*122*76	2,6
PowerPack 500 Rack platinum	0275.007.531	36Vx40, 13,4 Ah, 500 Wh	370*122*76	2,7
PowerPack 500 Rack anthracite	0275.007.532	36Vx40, 13,4 Ah, 500 Wh	370*122*76	2,7
PowerPack 500 US Frame Anthracite	0275.007.534	36Vx40, 13,4 Ah, 500 Wh	320*90*90	2,6
PowerPack 500 US Rack Type Anthracite	0275.007.536	36Vx40, 13,4 Ah, 500 Wh	370*122*76	2,7
PowerPack 300 Frame Anthracite	0275.007.548	36Vx40, 8,2 Ah, 300Wh	320*90*90	2,4
PowerPack 300 Frame Anthracite Japan	0275.007.549	36Vx40, 8,2 Ah, 300Wh	320*90*90	2,4
PowerPack 300 Rack Anthracite	0275.007.550	36Vx40, 8,2 Ah, 300 Wh	370*122*76	2,7
PowerTube 500 horizontal	0275.007.539	36Vx40, 13,4 Ah, 500 Wh	360*84*65	2,8
PowerTube 500 Vertical	0275.007.540	36Vx40, 13,4 Ah, 500 Wh	360*84*65	2,8
PowerTube 500 horizontal US	0275.007.541	36Vx40, 13,4 Ah, 500 Wh	360*84*65	2,8
PowerTube 500 Vertical US	0275.007.542	36Vx40, 13,4 Ah, 500 Wh	360*84*65	2,8
PowerTube 400 horizontal	0275.007.555	36Vx40, 11 Ah, 400 Wh	360*84*65	2,8
PowerTube 400 Vertical	0275.007.556	36Vx40, 11 Ah, 400 Wh	360*84*65	2,8
PowerTube 400 horizontal US	0275.007.557	36Vx40, 11 Ah, 400 Wh	360*84*65	2,8
PowerTube 400 Vertical US	0275.007.558	36Vx40, 11 Ah, 400 Wh	360*84*65	2,8
PowerTube 625 horizontal	0275.007.543	36Vx50, 16,7 Ah, 625 Wh	416*84*65	3,4
PowerTube 625 Vertical	0275.007.544	36Vx50, 16,7 Ah, 625 Wh	416*84*65	3,4
PowerTube 625 horizontal US	0275.007.545	36Vx50, 16,7 Ah, 625 Wh	416*84*65	3,4
PowerTube 625 Vertical US	0275.007.546	36Vx50, 16,7 Ah, 625 Wh	416*84*65	3,4
PowerTube 750 vertical EU	EB12.100.00W	36Vx60, 20,1 Ah, 750 Wh	483*84*65	4,2
PowerTube 750 horizontal EU	EB12.100.00X	36Vx60, 20,1 Ah, 750 Wh	483*84*65	4,2
PowerTube 750 vertical US	EB12.100.00Y	36Vx60, 20,1 Ah, 750 Wh	483*84*65	4,2
PowerTube 750 horizontal US	EB12.100.00Z	36Vx60, 20,1 Ah, 750 Wh	483*84*65	4,2

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Robert Bosch GmbH
Automotive Electronics
Gerhard-Kindler-Str.3
P.O. Box 72770
Reutlingen - Germany
T +49 (0)7121 7666000
E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

1.4. Emergency telephone number

Emergency number : +49 (0)6132/84463 (GBK GmbH)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification : In case of electrolyte leakage: According to concentration, aqueous solution causes irritations or burns of eyes, skin and mucous membranes. In case of cell damage, possible release of dangerous substances and a flammable gas mixture.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Comments	: Chemical characterization Our battery packs meets the definition of "Article" for OSHA Hazard Communication Standard 29CFR Subpart 1910.1200 and of "Manufactured Article" for CCOHS Workplace Hazardous Materials Information System 2015 and therefore our battery packs are exempted from these requirement hence a MSDS/SDS sheet is not required"
	Kathode: Lithium-Metall Oxide (active material) Polyvinylidene Fluoride (Binder) Graphite (conductive material) Aluminium Foil
	Anode: Carbon(active material) Polyvinylidene Fluoride (Binder) Cooper Foil
	Electrolyte: Organic solvent (non aqueous liquid) Silicic acid, lithium salt
	Further Information Because of the cell structure the dangerous ingredients will not be available if used properly.

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: The following first aid measures are required only in case of exposure to interior battery components after damage of the external battery casing. Undamaged, closed cells do not represent a danger to the health.
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects	: In case of electrolyte leakage: According to concentration, aqueous solution causes irritations or burns of eyes, skin and mucous membranes.
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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:
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Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear personal protective equipment. Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid short circuiting the cell. Avoid mechanical damage of the cell. Do not open or disassemble.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in original container. Store in a well-ventilated place. Keep cool.
Storage temperature : < 40 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

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8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

8.2.2.2. Skin protection

Hand protection:

In case of electrolyte leakage: natural rubber gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of electrolyte leakage: Use respiratory protection

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:

In case of electrolyte leakage: Do not breathe gas/fumes, Avoid contact with skin, eyes and clothing, Eliminate ignition sources, Wear personal protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Various.
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: Not applicable
Upper explosive limit (UEL)	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: No data available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available

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Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Electrolyte and electrodes may react with water or moisture.

10.4. Conditions to avoid

Do not puncture, crush or incinerate. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. High temperature.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	2000 mg/kg
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Skin corrosion/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met

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Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

11.2.2 Other information

Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met
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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information	: Avoid release to the environment
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
European List of Waste (LoW) code : 16 06 05 - other batteries and accumulators

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3480	UN 3480	UN 3480	UN 3480	UN 3480
14.2. UN proper shipping name				
LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	Lithium ion batteries	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES
Transport document description				
UN 3480 LITHIUM ION BATTERIES, 9, (E)	UN 3480 LITHIUM ION BATTERIES, 9	UN 3480 Lithium ion batteries, 9	UN 3480 LITHIUM ION BATTERIES, 9	UN 3480 LITHIUM ION BATTERIES, 9
14.3. Transport hazard class(es)				
9A	9A	9A	9A	9A
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M4
Special provisions (ADR) : 230, 376, 377, 636
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P903, P908, P909, P910, LP903, LP904
Transport category (ADR) : 2
Tunnel restriction code (ADR) : E

Transport by sea

Special provisions (IMDG) : 230, 376, 377, 384
Packing instructions (IMDG) : P903, P908, P909, P910, LP903, LP904
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-I
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW19
MFAG-No : 147

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Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: See 965
CAO max net quantity (IATA)	: See 965
Special provisions (IATA)	: A88, A99, A154, A164, A183, A201, A206, A331
ERG code (IATA)	: 9F

Inland waterway transport

Classification code (ADN)	: M4
Special provisions (ADN)	: 230, 376, 377, 636
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M4
Special provisions (RID)	: 230, _376, 377, 387, 636
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P903, 908, 909, P910, P911, LP903, LP904, LP905, LP906
Transport category (RID)	: 2
Hazard identification number (RID)	: 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Water hazard class (WGK)	: Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
1.1	Other means of identification	Modified	

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Abbreviations and acronyms:	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
DOT	Department of Transport
TDG	Transportation of Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
IARC	International Agency for Research on Cancer
vPvB	Very Persistent and Very Bioaccumulative
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
CAS	CAS (Chemical Abstracts Service) number
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ATE	Acute Toxicity Estimate
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
BCF	Bioconcentration factor
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships
ADG	Transport of Australian Dangerous Goods

Other information : Note: This product is an "article" and is not an object that is required to issue Safety Data Sheets (SDS) by regulations concerning chemical substances. This SDS voluntarily offers helpful information for your safe handling and environmental care. Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.