

# Instructions for the safe handling of lead-acid accumulators (lead-acid batteries)

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The REACH Regulation (EC) No. 1907/2006 requires the preparation and updating of safety data sheets for substances and mixtures. For articles/products—such as lead-acid batteries—REACH safety data sheets are not required under European chemicals legislation. The provision of a fact sheet containing “Guidelines for the Safe Handling of Batteries” is to be understood solely as product information. While modeling the format of a REACH safety data sheet and providing the information specified therein is generally advisable from a product and occupational safety perspective, it must not be confused with the requirements for a REACH safety data sheet. This information sheet is intended for battery users. Its use is voluntary. The guidance provided here is intended to assist with compliance with legal requirements but does not replace them. The information contained in this guidance document may also be used to fulfill the requirements of Article 74 of Regulation (EU) 2023/1542.

## 1. Identification of the substance/mixture and of the company/undertaking

Data on the product (see attachment - page 8)

### Lead-acid batteries filled with diluted sulphuric acid

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## 2. Hazards identification

No hazards in case of an intact battery and observation of the instructions for use.

Lead-acid batteries have significant characteristics:

- » They contain diluted sulphuric acid, which may cause severe acid burns.
- » During the charging process they develop hydrogen gas and oxygen, which under certain circumstances may turn into an explosive mixture.
- » They have an internal voltage, which –depending on their level –can be dangerous to the human body when touched.

Standard EN 50272-2 includes safety requirements for batteries and battery installations and describes the basic precautions to protect against dangers deriving from electric currents, leaking gases or electrolytes.

## 3. Composition/information on ingredients

| CAS-No.   | Description                                       | Content     | H-phrases                                |
|-----------|---------------------------------------------------|-------------|------------------------------------------|
| 7439-92-1 | blue lead,<br>lead alloys with<br>traces of As,Sb | 32 Weight % | H360, H362,<br>H332, H302,<br>H372, H351 |
| --        | lead-containing<br>Battery paste                  | 32 Weight % | H360D<br>H302, H332<br>H361f, H412       |
| 7664-93-9 | sulphuric acid                                    | 29 Weight % | H290<br>H314                             |
| --        | plastic case                                      | 7 Weight %  |                                          |

Note.: lead-metal is a substance of the REACH Candidate list.

**Batteries are marked with the following hazard symbols:**

| Reference                                                                                                                                                                                                       | Description                                                                                                                            | Safety Symbol                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ISO 7010 P003                                                                                                                                                                                                   | No open flame; Fire, open ignition source and smoking prohibited<br>Keine offene Flamme, Feuer, offene Zündquelle und Rauchen verboten |    |
| ISO 7010 M004                                                                                                                                                                                                   | Wear eye protection<br>Augenschutz benutzen                                                                                            |    |
| ISO 7010 P036                                                                                                                                                                                                   | No children allowed<br>Kein Zutritt für Kinder                                                                                         |   |
| ISO 7010 W023                                                                                                                                                                                                   | Warning: Corrosive substance<br>Warnung vor ätzenden Stoffen                                                                           |  |
| ISO 7010 M002                                                                                                                                                                                                   | Refer to instruction manual/booklet<br>Anleitung/ Bedienungsanweisung beachten                                                         |  |
| ISO 7010 W002                                                                                                                                                                                                   | Warning: Explosive material<br>Warnung vor explosionsgefährlichen Stoffen                                                              |  |
| In dependence of the respective normative background the hazard symbols shown here are suitable to fulfill the safety-related requirements.<br>A marking of batteries after GHS CLP-regulation is not required. |                                                                                                                                        |                                                                                       |

#### 4. First aid measures

##### General information:

|                                             |                                                                |
|---------------------------------------------|----------------------------------------------------------------|
| <b>Sulphuric acid</b>                       | acts corrosive and damages tissue                              |
| after contact with skin                     | rinse with water, remove and washwetted clothing               |
| after inhalation of acid mist <sup>2)</sup> | inhale fresh air                                               |
| after contact with the eyes <sup>2)</sup>   | rinse under running water for several minutes                  |
| after swallowing <sup>2)</sup>              | drink a lot of water immediately, and swallow activated carbon |
| <b>Lead-containing battery paste</b>        | lassified as toxic for reproduction                            |
| after contact with skin                     | clean with water and soap                                      |

<sup>2)</sup> Seek the advice of a doctor.

#### 5. Firefighting measures

##### Suitable extinguishing agents

- When electrical devices are set on fire in general water and foam are suitable extinguishing agents. For incipient fires CO<sub>2</sub> is the most effective agent. Fire brigades are trained to keep a distance of 1 m when extinguishing an electrical fire (up to 1 kV) with spray jet and a distance of 5 m with full jet. For electrical fires in electrical installations with voltages > 1 kV other distances are applicable depending on the respective voltage. For fires in photovoltaic installations other rules apply.

##### Unsuitable extinguishing agents

- Powder fire extinguishers are not suitable, amongst others because of only minor efficiency, possible risks or collateral damages.

##### Special protective equipment

- For larger stationary battery installations or larger stored quantities: protective goggles, respiratory and acid protective equipment, acid-proof clothing.

#### 6. Accidental release measures

Cleaning / take-up procedures:

- Use a bonding agent, such as sand, to absorb split acid;
- Use lime / sodium carbonate for neutralisation;
- Dispose with due regard to the official local regulations;
- Do not permit penetration into the sewage system, the earth or water bodies.

#### 7. Handling and storage

- Store under cover in a frost-free location; avoid short circuits.
- Protect the plastic housing from direct sunlight.
- For large quantities, consult with local water authorities.
- If batteries are to be charged in storage areas, be sure to follow the operating instructions, as gas may be produced during charging.
- When working on batteries, wear safety goggles, electrostatic-dissipative protective clothing, and safety shoes

#### 8. Exposure Limits and Monitoring /

##### Personal Protective Equipment

##### 8.1 No Exposure to Lead and Lead-Containing Battery Paste

Since the battery is sealed, there is no exposure

##### 8.2 Potential for exposure to sulfuric acid and acid mist during filling and charging

|                                |                                                                                                                                           |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Substance                      | sulphuric acid                                                                                                                            |
| CAS-No.                        | 7664-93-9                                                                                                                                 |
| H-phrases                      |                                                                                                                                           |
| H 290                          | May be corrosive to metals.                                                                                                               |
| H 314                          | Causes severe skin burns and eyedamage.                                                                                                   |
| P-phrases                      |                                                                                                                                           |
| P 280                          | Wear protective gloves/protective clothing/eye protection/face protection.                                                                |
| P 301 + P 330 + P 331          | <b>IF SWALLOWED:</b><br>Rinse mouth. Do NOT induce vomiting.                                                                              |
| P 303 + P 361 + P 353          | <b>IF ON SKIN (or hair):</b><br>Take off immediately all contaminated clothing.                                                           |
| P 305 + P 351 + P 338          | <b>IF IN EYES:</b><br>Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do –continue rinsing. |
| Threshold value:               | 0,1 mg/m <sup>3</sup> (E) on workplace                                                                                                    |
| Hazard symbol:                 | corrosive                                                                                                                                 |
| Personal protective equipment: | Rubber-, PVC-gloves, acid-proof goggles, acid-proof clothing, safety boots                                                                |

## 9. Physical and chemical properties

### Lead

Appearance:  
form: solid  
colour: grey  
odour: odourless

### Sulphuric acid (30 –38,5 %)

Appearance:  
form: liquid  
colour: colourless  
odour: odourless

#### Safety-related data

Solidification point:  
327 °C

Boiling point: 1740 °C

Solubility in water (25 °C):

low (0,15 mg/l)

density (20 °C): 11,35 g/cm<sup>3</sup>

#### Safety-related data

Solidification point:  
-35 to -60 °C

Boiling point: ca. 108-114 °C

Solubility in water (25 °C):

complete

densit (20 °C): 1,2-1,3 g/cm<sup>3</sup>

## 10. Stability and reactivity of sulphuric acid (30 to 38,5%)

- Corrosive, non-flammable liquid;
- Thermal decomposition at 338 °C;
- Decomposes organic materials such as cardboard, wood, and textiles;
- Reacts with metals to form hydrogen;
- Violent reactions with alkalis and bases.

## 11. Toxicological information

### Sulphuric acid

- Is highly corrosive to the skin and mucous membranes.
- Inhalation of mists may cause damage to the respiratory tract.

### Lead and lead-containing battery paste

- If absorbed into the body, they can damage the blood, nerves, and kidneys;
- Battery paste containing lead is toxic to reproduction.

## 12. Environmental Information

This section applies only if battery constituents are released as a result of battery destruction

### Sulphuric acid

- Liquid hazardous to water as defined by the Water Resources Act (WHG). Water hazard class: 1 (low hazard to water)
- As described in Section 6, the spilled acid must be contained using a binding agent—e.g., sand—or
- neutralized with lime or soda and disposed of in accordance with official local regulations.
- Do not allow the substance to enter the sewer system, the soil, or water bodies

## Lead and lead-containing battery paste

- Are poorly soluble in water.
- Lead can be dissolved in acidic or alkaline environments.
- Chemical flocculation is required to remove it from water.
- Wastewater containing lead must not be discharged without treatment.

## 13. Disposal considerations

Retailers, battery manufacturers and importers, and metal dealers accept used lead-acid batteries and send them to secondary lead smelters for recycling.

Used lead-acid batteries are not subject to the reporting requirements of the German Reporting Ordinance, but rather to the regulations set forth in EU Regulation 2023/1542 and the respective national implementation. They are marked with the recycling/return symbol and a crossed-out trash can. (See also Section 15)

Used lead-acid batteries must not be disposed of with household waste or mixed with batteries from other systems, so as not to hinder recycling and to prevent harm to people and the environment.

Under no circumstances should the electrolyte (diluted sulfuric acid) be disposed of improperly; this process must be carried out by recycling facilities.

## 14. Transport information

### 14.1 Batteries, wet, filled with acid Land transportation according to ADR/RID

Special Provision 598: Transport of dangerous goods not subject to declaration requirements (new and used batteries are not subject to the other provisions of the ADR/RID if the conditions set forth in Special Provision 598 are met):

#### » 1) New storage batteries when:

- a) they are secured against slipping, tipping over, and damage;
- b) they are equipped with carrying devices, unless, for example, they are stacked on pallets;
- c) they show no dangerous traces of alkalis or acids on the outside;
- d) they are protected against short circuits

## » 2) Used batteries when:

- a) their housings show no signs of damage;
- b) they are secured against leakage, slipping, tipping over, and damage – for example, by being stacked on pallets;
- c) they show no dangerous traces of alkalis or acids on the outside;
- d) they are protected against short circuits.

If the conditions of Special Provision 598 are not met, new and used batteries must be declared and transported as dangerous goods as follows:

- UN No.: 2794
- Name and description: BATTERIES, WET, FILLED WITH ACID
- Class: 8
- Packaging group: none
- Hazard label: 8
- ADR tunnel restriction code: E

## » Sea transportation according to IMDG Code

- UN No.: 2794
- Proper technical name: BATTERIES, WET, FILLED WITH ACID
- Class 8
- Packing group: none
- Packing instruction: P801
- EmS: F-A, S-B
- Hazard label: 8

## » Air transportation according to IATA-DGR

- UN No.: 2794
- Proper shipping name: BATTERIES, WET, FILLED WITH ACID or BATTERIES, WET, FILLED WITH ACID
- Class 8
- Packing group: none
- Packing instruction: 870
- Hazard label: (8) Corrosive

## 14.2 Batteries, wet, non-spillable

### » Land transportation according to ADR/RID

- UN No.: 2800
- Description: BATTERIES, WET, LEAK-PROOF
- Class: 8
- Packing group: none
- Hazard label: 8
- Packing instructions: P 003, P801a

- Special Provision 238, Sections a) and b): No declaration required for the transport of dangerous goods (Leak-proof batteries are not subject to the other provisions of the ADR/RID if the batteries meet the criteria specified in Special Provision 238.) A corresponding manufacturer's declaration must be available.
- Batteries that do not meet the criteria specified in Special Provision 238 must be packed and transported in accordance with Special Provision 598 under 14.1 Land Transport ADR/RID.)

### » Sea transportation according to IMDG Code

- UN No.: 2800
- Proper technical name: BATTERIES, WET, NON-SPILLABLE or BATTERIES, WET, NON-SPILLABLE
- Class: 8
- Packing group: none
- Packing instructions: P 003 and PP 16
- Hazard label: 8
- EmS: F-A, S-B
- Special Provision 238 Nos. 1 and 2: No declaration required for the transport of dangerous goods (Leak-proof batteries are not subject to the other provisions of the IMDG if the batteries meet the criteria specified in Special Provision 238 Nos. 1 and 2. A corresponding manufacturer's declaration must be available.
- Batteries that do not meet the criteria specified in Special Provision 238 must be packed in accordance with Packing Instruction P801 for 14.1 Maritime Transport (IMDG) and transported as dangerous goods under UN 2794.)

### » Air transportation according to IATA DGR

- UN No.: 2800
- Proper shipping name: BATTERIES, WET, NON-SPILLABLE or BATTERIES, WET, NON-SPILLABLE
- Class: 8
- Packing Group: None
- Packing Instruction: 872
- Hazard Label: (8) Corrosive
- Special Provision A 67: Not subject to mandatory declaration as dangerous goods (Leak-proof batteries that meet the criteria of Special Provision A67 are not subject to the other IATA DGR regulations.
- Prerequisite: The terminals must be protected against short circuits. A corresponding manufacturer's declaration must be provided.
- Batteries that do not meet the criteria specified in Special Provision A67 must be packed in accordance with Packing Instruction 870 under IATA DGR 14.1 for air transport and carried as dangerous goods under UN 2794.)

### 14.3 Batteries, damaged:

#### » Land transportation according to ADR/RID

- UN No.: 2794
- Name and Description: WASTE, BATTERIES, WET, FILLED WITH ACID, HAZARDOUS TO THE ENVIRONMENT
- Class: 8
- Packaging Group: None
- Transport of dangerous goods in accordance with the
  - Packing instruction P 801 a: Packed in battery boxes or
  - Special provisions VC1, VC2, AP8: in bulk
- Hazard label: 8
- ADR Tunnel Restriction Code: E
- Note: These instructions may also be applied to the transport of lead-acid batteries with UN No. 2800

### 15. Legal Requirements

Lead-acid batteries, regardless of their shape, volume, weight, or use, fall within the scope of the European Battery Regulation (2023/1542). This regulation contains provisions regarding, among other things, the placing on the market, collection, treatment, recycling, and labeling of batteries.

### 16. Other Information

Proposed guidelines regarding the required information on waste prevention and the management of used batteries pursuant to Article 74(1).

*Please note: The information below is based on current knowledge and does not constitute a guarantee of any properties. The recipient of the product is responsible for complying with applicable laws and regulations.*

#### 74 (1 a):

##### End-users' contribution to waste prevention

Batteries should be used in a way that allows them to reach their maximum service life.

Please note the following recommendations:

- Use batteries only for their intended purpose and in accordance with the manufacturer's instructions.
- Charge rechargeable batteries only with suitable chargers and in accordance with the operating instructions.
- Avoid deep discharge, overcharging, short circuits, mechanical damage, and use at unsuitable temperatures.

- Store batteries in a dry place, protected from direct sunlight and away from extreme heat.
- Remove batteries from devices if they will not be used for an extended period of time, provided this can be done safely and in accordance with the intended use.
- Before disposal, check whether reuse, repurposing, or re-conditioning is technically possible and permissible.

By using and storing batteries properly, end users help prevent waste and extend the service life of batteries.

#### 74 (1b):

##### End-user contribution to separate collection

Used batteries must not be disposed of with unsorted household waste.

End users are required to collect used batteries separately and return them to the designated return and collection systems.

Separate collection is necessary to ensure that used batteries can be recycled properly and, in particular, in an environmentally sound manner.

#### 74 (1c):

##### Return and collection points, reuse, and treatment of used batteries

Used batteries can be returned free of charge at appropriate return and collection points, in particular:

- at retailers that sell batteries or battery-powered products, to the extent required by law,
- at municipal collection points or recycling centers,
- at other authorized take-back or collection systems.

#### 74 (1d):

##### Safety Instructions for Handling Used Batteries

Improper handling may result in fire, overheating, leakage of hazardous substances, or other hazards.

Please note the following in particular:

- Follow the safety warnings on the battery and in the user manual
- Keep batteries out of the reach of children
- Do not open, disassemble, or damage batteries

- Do not throw batteries into water, do not throw them into fire, and do not expose them to high temperatures.
- Do not continue to use batteries that are damaged, deformed, swollen, leaking, or overheated.
- Protect battery terminals—especially those of lithium batteries – against short circuits, e.g., by taping over the terminals, provided this can be done safely.
- Store and transport used batteries separately from metal objects.
- In the event of a leak, avoid skin, eye, and inhalation contact.

Additional information on lithium-containing batteries:

- Precautions must be taken to ensure that no Li-ion batteries enter the lead recycling process

#### **74 (1e):**

##### **Meaning of Labels and Symbols**

Please pay attention to the labels and symbols on the battery, on the packaging, or in the accompanying documentation.

In particular:

- The symbol of the crossed-out trash can means that the battery must not be disposed of with household waste but must be collected separately.
- Additional chemical symbols or other labels provide information about the battery's ingredients or special properties.
- Other markings may contain information regarding safe use, capacity, chemical composition, identification, or separate return.
- The CE symbol indicates compliance with applicable EU regulations

Please refer to the product-specific information for the respective battery model.

#### **74 (1f):**

##### **Impact of Battery Substances on the Environment, Health, and Safety**

Batteries may contain substances that, if handled or disposed of improperly, can have negative effects on the environment, health, and safety.

Improper disposal, damage, incineration, or disposal in unsorted household waste can lead to the following risks, among others:

- Release of substances harmful to the environment and human health,
- Fire and explosion hazards,
- Contamination of soil, water, and air,
- Risk to people during collection, sorting, and disposal.

The separate collection and proper handling of used batteries therefore help protect the environment, human health, and personal safety, as well as facilitate the recovery of valuable raw materials.

# Attachment to the safety data sheet for Lead accumulators (lead batteries)

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## Attachment to point 1: Identification of the substance/mixture and of the company/undertaking

Data on the product:

### INTACT

» intAct Start-Power – Car Standard up to 110 AH

» intAct Start-Power Truck – Truck Standard from 100 AH

» intAct Premium-Power – Car Starter Batteries

» intAct Premium Power Truck – Truck Starter Batteries

» intAct Start-Stop-Power AGM – Starter Batteries

» intAct Start-Stop-Power EFB – Starter Batteries

» intAct Start-Stop-Power EFB Truck – Starter Batteries

» intAct US Power – Starter Batteries

» intAct Oldtimer Power – Starter Batteries

» intAct Bike-Power Classic– Starter Batteries

» intAct Bike-Power AGM – Starter Batteries

» intAct Bike-Power AGM SLA – Starter Batteries

» intAct Bike-Power GEL – Starter Batteries

» intAct Bike-Power GEL HVT-HD – Starter Batteries

» intAct Bike-Power AGM HVT – Starter Batteries

» intAct Traktion Power – Supply Batteries

» intAct Traktion-Power PzS – Supply Batteries

» intAct Traktion-Power Deepcycle AGM –  
Supply Batteries

» intAct Flooded-Power – Supply Batteries

» intAct AGM-Power – Supply Batteries

» intAct GEL-Power – Supply Batteries

» intAct Block-Power – Supply Batteries

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