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

1.1 Product identifier

Trade name

Valve Regulated Lead-Acid (VRLA) Industrial Battery

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

Relevant identified uses of the substance or mixture

battery

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

Eppendorf AG

Barkhausenweg 1

D-22339 Hamburg

Telephone no. +49 40 53801-0

Information provided by / telephone

Eppendorf Application-Hotline

Tel.: +49 1803 66 67 89

Fax: +49 4053 99 01 25

email: support@eppendorf.com

Advice on Safety Data Sheet

sdb_info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification information

This product is in the sense of article 3 of the Regulation (EC) 1907/2006 (REACH) an article and not subject to the labelling obligations according to:


To provide a safety data sheet is not mandatory for articles according to art. 31 of the Regulation (EC) 1907/2006 (REACH) and is done on a voluntary basis.

2.2 Label elements

Not relevant

2.3 Other hazards

PBT assessment

No data available.

vPvB assessment

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Hazardous ingredients

This product does not contain substances to be mentioned according to EU Regulation No 1907/2006 (REACH), annex II.
SECTION 4: First aid measures

4.1 Description of first aid measures

General information
No special measures necessary. The first aid information refers to the electrolyte solution and is only relevant for leaking batteries.

After inhalation
Ensure supply of fresh air. In case of persisting adverse effects consult a physician.

After skin contact
In case of contact with skin wash off with water. Call a doctor immediately.

After eye contact
Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Call a doctor immediately.

After ingestion
Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Carbon dioxide; Dry chemical extinguisher; Foam

Unsuitable extinguishing media
Water

5.2 Special hazards arising from the substance or mixture
May explode if exposed to heat. In the event of fire, the following can be released: Carbon dioxide (CO2); Carbon monoxide (CO); Sulphur oxides (SxOy); Lead fumes

5.3 Advice for firefighters
Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up
Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Send in suitable containers for recovery or disposal.

6.4 Reference to other sections
Information regarding safe handling, see chapter 7. Information regarding personal protective measures, see chapter 8. Information regarding waste disposal, see chapter 13.

SECTION 7: Handling and storage
7.1 Precautions for safe handling

Advice on safe handling
No special measures necessary if stored and handled as prescribed.

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash soiled clothing. Wash hands before breaks and after work.

Advice on protection against fire and explosion
VRLA batteries emit hydrogen gas. Never install VLRA batteries in a gas-tight enclosure during storage, handling and usage.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Protect from heat and direct sunlight. Protect against humidity

Recommended storage temperature
Value  -20  - 50  °C

Requirements for storage rooms and vessels
Keep only in the original container.

Incompatible products
Do not store together with: combustible materials

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No parameters available for monitoring.

8.2 Exposure controls

Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
No special measures required.

Eye / face protection
No special measures required. If free electrolyte is present: safety googles or face shield

Hand protection
No special measures required. If free electrolyte is present: acid resistend safety gloves

Other
Remove ALL metallic objects when working with VRLA batteries.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Form/Colour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>solid</td>
<td></td>
</tr>
<tr>
<td>grey; black</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Odour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>slight, original odour</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Odour threshold</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>pH value</th>
<th></th>
</tr>
</thead>
</table>
No data available

Boiling point / boiling range
No data available

Melting point / melting range
No data available

Decomposition point / decomposition range
No data available

Flash point
No data available

Auto-ignition temperature
No data available

Oxidising properties
No data available

Explosive properties
No data available

Flammability (solid, gas)
No data available

Lower flammability or explosive limits
No data available

Upper flammability or explosive limits
No data available

Vapour pressure
No data available

Vapour density
No data available

Evaporation rate
No data available

Relative density
No data available

Density
No data available

Solubility in water
No data available

Partition coefficient: n-octanol/water
No data available

Viscosity
No data available

9.2 Other information
Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable under recommended storage and handling conditions (See section 7).
10.3 Possibility of hazardous reactions
Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid
Moisture. Heat; Temperatures > 50°C.

10.5 Incompatible materials
none, if handled according to order

10.6 Hazardous decomposition products
Hydrogen

SECTION 11: Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Data Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute inhalational toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Data Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to fish (chronic)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Daphnia (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Daphnia (chronic)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to algae (acute)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
EC safety data sheet

Trade name: Valve Regulated Lead-Acid (VRLA) Industrial Battery

Current version: 4.0.0, issued: 29.07.2019

Replaced version: 3.1.0, issued: 09.07.2019

Region: GB

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th>Results of PBT and vPvB assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT assessment</td>
</tr>
<tr>
<td>vPvB assessment</td>
</tr>
</tbody>
</table>

12.6 Other adverse effects
No data available.

12.7 Other information
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

| Class       | 8          |
|_classification code | C11        |
| Hazard identification no. | 80         |
| UN number   | UN2800     |
| Proper shipping name | BATTERIES, WET, NON-SPILLABLE |
| Tunnel restriction code | E          |
| Label       | 8          |

14.2 Transport IMDG

| Class   | 8          |
| UN number | UN2800     |
| Proper shipping name | BATTERIES, WET, NON-SPILLABLE |
| EmS     | F-A, S-B   |
| Label   | 8          |

14.3 Transport ICAO-TI / IATA

| Class   | 8          |
| UN number | UN2800     |
| Proper shipping name | Batteries, wet, non-spillable |
| Label   | 8          |

14.4 Other information
No data available.
14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS no.</th>
<th>EC no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lead massive [particle diameter ≥ 1 mm]</td>
<td>7439-92-1</td>
<td>231-100-4</td>
</tr>
</tbody>
</table>

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances
This product is not subject to Part 1 or 2 of Annex I.

Other regulations
Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment
Not required.

SECTION 16: Other information

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Department issuing safety data sheet
UMCO GmbH
Georg-Wilhelm-Str. 187, D-21107 Hamburg
Tel.: +49 40 / 555 546 300  Fax: +49 40 / 555 546 357  e-mail: umco@umco.de

This information is based on our present knowledge and experience.
The safety data sheet describes products with a view to safety requirements.
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.
Alterations/supplements:
Alterations to the previous edition are marked in the left-hand margin.

Document protected by copyright. Alterations or reproductions require the express written permission of UMCO GmbH.
Prod-ID 731850