

SAFETY DATA SHEET (SDS)

VALVE REGULATED LEAD ACID, SEALED, NON-SPILLABLE BATTERY

Batteries are considered as articles under REACH regulation 1907/2006/EC and, as such, do not require the publication of a safety data sheet. This document has been prepared in good faith to provide safety information under the general guide lines of SDS/ MSDS/ Instructions for Safe Handling of Lead Acid Batteries.

1) Identification of the substance/mixture and of the company/undertaking

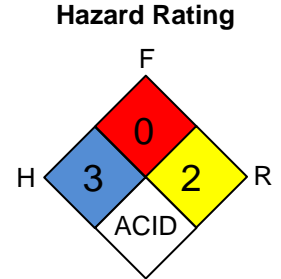
1.1 Product identifier: Valve Regulated Lead Acid (VRLA), Sealed, Non-Spillable Battery

Trade name: **RED FLASH™, VARLEY RED TOP™**

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Deep Cycle & High Rate battery for general applications

1.3 Details of the supplier of the safety data sheet: DMS technologies,
Belbins Business Park, Cupernham Lane, Romsey, Hampshire, SO51 7JF.

1.4 Emergency telephone number: Tel: 01794 525 400



2) Hazards identification

2.1 GHS Classification of the substance or mixture: (Physical)

The Non-Spillable battery is a solid, manufactured article, which is adequately sealed (to avoid exposure to hazardous ingredients) when used according to the manufacturers recommendations. Under normal conditions of use, electrode materials and liquid electrolyte are contained, and are non-reactive provided the battery integrity is maintained and seals remain intact. Any risk of exposure is only in abuse situations, e.g. Mechanical, Thermal, Electrical, which may lead to the activation of safety vent valves, and/or the rupture of individual cell containers. Acidic electrolyte leakage can occur in abuse situations, which could subsequently result in a reaction with surrounding material or a chemical burn.

| Health | | Environmental | Physical |
|------------------------------------------------|-------------|-------------------|----------------------------------|
| Acute Toxicity (Oral/Dermal/Inhalation) | Category 4 | Aquatic Chronic 1 | Explosive Chemical, Division 1.3 |
| Skin Corrosion/Irritation | Category 1A | Aquatic Acute 1 | |
| Eye Damage | Category 1 | | |
| Reproductive | Category 1A | | |
| Carcinogenicity (lead) | Category 1B | | |
| Carcinogenicity (arsenic) | Category 1A | | |
| Carcinogenicity (acid mist) | Category 1A | | |
| Specific Target Organ Toxicity (repeated exp.) | Category 2 | | |

2.2 GHS Label elements: (Chemical)

Classification of dangerous substances contained in the product as per Directive.

No hazards occur during the normal operation of a lead acid battery as it is described in the instructions for use (provided with the battery).

Lead-acid batteries have three significant characteristics:

- I) They contain an electrolyte which contains dilute sulphuric acid. Sulphuric acid may cause severe chemical burns.
- II) During the charging process or during operation they might develop hydrogen gas and oxygen, which under certain circumstances may result in an explosive mixture.
- III) They can contain a considerable amount of energy, which may be a source of high electrical current and a severe electrical shock in the event of a short circuit.

Paragraph 15 of the document provides information on the symbols that are displayed on the batteries.

| Health | Environmental | Physical |
|--------------------------------------------------|-----------------------------|------------------|
| <p>Harmful Corrosive Health Hazard</p> | <p>Environmental Hazard</p> | <p>Explosive</p> |
| <p>Signal Word: Danger</p> | | |

SAFETY DATA SHEET (SDS)

VALVE REGULATED LEAD ACID, SEALED, NON-SPILLABLE BATTERY

Hazard Statements:

| Category | GHS Codes | Description |
|---------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Health | H302 | Harmful if swallowed |
| | H314 | Causes severe skin burns and eye damage. |
| | H332 | Harmful if inhaled |
| | H360 | May damage fertility or the unborn child or cancer (if ingested or inhaled) |
| | H373 | May causes damage to central nervous system, blood & kidneys through prolonged or repeated exposure. |
| Environmental | H410 | Very toxic to aquatic life with long lasting effects |
| Physical | H220 | Extremely flammable gas (hydrogen) May form explosive air/gas mixture during charging. Explosive, fire, blast, or projection hazard. |

Precautionary Statements:

| Category | GHS Codes | Description |
|----------|--------------|--------------------------------------------------------------------------------------------------------------------------------|
| Health | P260 | Do not breathe dust/fume/gas/mist/vapours/spray |
| | P301/330/331 | If swallowed: rinse mouth. Do not induce vomiting. |
| | P303/361/353 | If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| | P304/340 | If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| Handling | P305/351/338 | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present & easy to do. Continue rinsing. |
| | P310 | Immediately call a POISON CENTER or doctor/physician. |
| | P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking |
| | P260 | Do not breathe dust/fume/gas/mist/vapours/spray |
| | P264 | Wash thoroughly after handling. |
| Physical | P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| | P403 | Use and Store in well-ventilated area |
| | P405 | Store locked up. |
| | P391 | Collect spillage |
| | P273 | Avoid release to the environment |
| | P501 | Dispose of contents/container in accordance with local/regional/national/international regulation. |

2.3 Other hazards:

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| | Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid. Causes skin irritation, serious eye damage. Irritating to eyes, respiratory system, and skin. Do not eat, drink or smoke when using this product. May form explosive air/gas mixture during charging. |
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3) Composition/information on ingredients³⁾:

3.1 Substances: Although the composition of the various cell manufacturers is proprietary, the following is typical of the chemistry.

VRLA Battery

| Hazardous Components (Specific Chemical Identity; Common Name(s)) | Content % of weight | CAS Number | Hazard symbol |
|-------------------------------------------------------------------|---------------------|-----------------------------------|---------------|
| Inorganic Lead/Lead Compounds | 60-70% | 7439-92-1 | T |
| Calcium | <0.15% | 7440-70-2 | / |
| Tin | <1% | 7440-31-5 | T |
| Arsenic (inorganic) | <1% | 7440-38-2 | T |
| Sulfuric Acid (Battery Electrolyte) | 10-29% | 7664-93-9 | C |
| Fiberglass Separator | ~ 2% | 65997-17-3 | / |
| Silicon Dioxide (some Gel batteries only) | ~ 10% of acid Wt | 7631-86-9 | / |
| Plastic Container / Plastic Parts (ABS or PP) | 4-12% | 9003-56-9 (ABS) 9003-07-0 (PP) | / |

Pure Lead VRLA Battery

| Hazardous Components (Specific Chemical Identity; Common Name(s)) | Content % of weight | CAS Number | Hazard symbol |
|----------------------------------------------------------------------|---------------------|-----------------------------------|---------------|
| Lead (metallic lead, lead alloys with potential traces of additives) | 45-60% | 7439-92-1 | T |
| Lead Dioxide | 15-25% | 1309-60-0 | T |
| Tin | 0.1-0.2% | 7440-31-5 | T |
| Sulfuric Acid (Battery Electrolyte) | 15-29% | 7664-93-9 | C |
| Plastic Container / Plastic Parts (ABS or PP) | 4-12% | 9003-56-9 (ABS) 9003-07-0 (PP) | / |

Notes:

- Inorganic lead and sulfuric acid electrolyte are the primary components of DMS supplied VRLA battery Products.
- There are no mercury or cadmium containing products present in DMS supplied VRLA battery Products.

SAFETY DATA SHEET (SDS)

VALVE REGULATED LEAD ACID, SEALED, NON-SPILLABLE BATTERY

4) First aid measures:

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| 4.1 Description of first aid measures: | In case of battery rupture or explosion, evacuate personnel from contaminated area and provide maximum ventilation to clear out corrosive fumes/gases and pungent odours. In all cases, seek immediate medical attention. | |
| 4.2 Most important symptoms and effects, both acute and delayed: | Eye contact: | Flush with plenty of water (eyelids-held open) for at least 15 minutes. |
| | Skin contact: | Remove all contaminated clothing and flush affected areas with plenty of water and soap for at least 15 minutes. |
| | Ingestion: | Dilute by giving plenty of water and get immediate medical attention. Assure that the victim does not aspirate vomited material by use of positional drainage. Assure that mucus does not obstruct the airway. Do not give anything by mouth to an unconscious person. |
| | Inhalation: | Remove to fresh air and ventilate the contaminated area. Give oxygen or artificial respiration if needed. |
| 4.3 Indication of any immediate medical attention and special treatment needed: | Seek medical attention if exposed to chemical spillage. | |

5) Firefighting measures:

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| Fire and explosion hazard | The batteries can release Hydrogen gas during charging. Flash Point: N/A Flammability Limits: LEL= 4.1% (Hydrogen gas) UEL= 74.2 % (Hydrogen gas) To avoid risk of fire or explosion, keep sparks or other sources of ignition away from batteries. Do not allow metallic materials to simultaneously contact negative and positive terminals of cells & batteries. Follow manufacturer's instructions for installation and service. | |
| 5.1 Extinguishing media: | Suitable: Class A/B/C extinguishers: (CO ₂ , Halon, Dry chemical or Foam) Do NOT use: CO ₂ directly on cells. Nor use Water if battery voltage is above 120 V | |
| 5.2 Special hazards arising from the substance or mixture: | Following cell overheating due to external source or due to improper use, electrolyte leakage or battery container rupture may occur and release inner component/material into the environment. | |
| | Eye contact: | The Sulfuric Acid electrolyte solution contained in the battery is highly corrosive and causes chemical burns to eyes & ocular tissues. |
| | Skin contact: | The Sulfuric Acid electrolyte solution contained in the battery is highly corrosive and causes chemical burns to skin. |
| | Ingestion: | The ingestion of Sulfuric Acid electrolyte solution causes tissue damage to throat and gastro/respiratory tract. |
| 5.3 Advice for firefighters: | Contents of a leaking or ruptured battery can cause respiratory tract, mucus membrane irritation and edema. | |
| | If batteries are on charge, shut off power. Note that strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down. Wear protective acid-resistant clothing, gloves, face and eye protection to prevent body contact with electrolyte solution. Use positive pressure, self-contained breathing apparatus. Water applied to electrolyte generates heat and causes it to spatter. | |

6) Accidental release measures:

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| 6.1 Personal precautions, protective equipment & emergency procedures: | Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8. |
| 6.2 Environmental precautions: | Prevent material from contaminating soil and from entering sewers or waterways. |
| 6.3a Methods and material for containment: | Stop the leak if safe to do so. Contain the spilled liquid with dry sand, earth or vermiculite. Do not use combustible materials. Clean up spills immediately. |
| 6.3b Methods and material for cleaning up: | If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal. |
| 6.4 Reference to other sections: | Section 8 |

7) Handling and storage:

The batteries should not be opened, destroyed nor incinerated, since they may leak or rupture and release their contents into the environment.

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| 7.1 Precautions for safe handling: | Do not crush, pierce, short (+) and (-) battery terminals with conductive (i.e. metal) goods. Do not directly heat or solder. Do not throw into fire. Do not mix batteries of different types, or mix with other hazardous materials. Do not mix new and used batteries. Keep batteries in non-conductive (i.e. plastic) trays. |
| 7.2 Conditions for safe storage, including any incompatibilities: | Store in a cool (preferably below 30°C), ventilated area away from moisture, sources of heat, open flames, food and drink. Keep adequate clearance between walls and batteries. Temperature above 90°C may result in battery leakage and rupture. Ensure batteries cannot become short circuited during storage, to avoid causing fire, leakage or rupture hazards. Keeping batteries in original packaging is recommended. |
| 7.3 Specific end use(s): | Observe Manufacturer's recommendations regarding maximum currents and operating temperature range. Do not apply pressure which could deform the battery case, as this may lead to disassembly followed by eye, skin and throat irritation. |

SAFETY DATA SHEET (SDS)

VALVE REGULATED LEAD ACID, SEALED, NON-SPILLABLE BATTERY

8) Exposure controls/personal protection:

| 8.1 Control parameters: | 8.2 Exposure control: |
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| Respiratory protection: | Not necessary under normal use. In case of battery rupture, use self-contained full-face respiratory equipment, with type ABEK filter. |
| Hand protection: | Not necessary under normal use. Use rubber gloves if handling a leaking or ruptured battery. |
| Eye protection: | Not necessary under normal use. Wear safety goggles, face shield or glasses with side shields if handling a leaking or ruptured battery. |
| Skin protection: | Not necessary under normal use. Use rubber apron and protective working in case of handling of a ruptured battery. |

9) Physical and chemical properties:

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| 9.1 Information on basic physical and chemical properties: (Physical shape and colour as supplied) | Manufactured article; no apparent odour. Electrolyte is a clear liquid with a sharp, penetrating, pungent odour. | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.2 Other information: | <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;"></td> <td style="text-align: right;">Electrolyte</td> </tr> <tr> <td>pH:</td> <td>~ 1 – 2</td> </tr> <tr> <td>Specific gravity (H₂O=1):</td> <td>1.215 – 1.350</td> </tr> <tr> <td>Boiling point:</td> <td>203 – 240°F</td> </tr> <tr> <td>Melting point:</td> <td>N/A</td> </tr> <tr> <td>Vapour Pressure (mm Hg):</td> <td>10</td> </tr> <tr> <td>Vapour Density (Air = 1):</td> <td>Greater than 1</td> </tr> <tr> <td>Solubility in Water:</td> <td>100%</td> </tr> <tr> <td>Reactivity in water</td> <td>Electrolyte is water reactive</td> </tr> <tr> <td>Flash point:</td> <td>Below room temperature (as hydrogen gas)</td> </tr> <tr> <td>LEL (Lower Explosive Limit):</td> <td>4.1% (Hydrogen)</td> </tr> <tr> <td>UEL (Upper Explosive Limit):</td> <td>74.2% (Hydrogen)</td> </tr> </table> | | Electrolyte | pH: | ~ 1 – 2 | Specific gravity (H₂O=1): | 1.215 – 1.350 | Boiling point: | 203 – 240°F | Melting point: | N/A | Vapour Pressure (mm Hg): | 10 | Vapour Density (Air = 1): | Greater than 1 | Solubility in Water: | 100% | Reactivity in water | Electrolyte is water reactive | Flash point: | Below room temperature (as hydrogen gas) | LEL (Lower Explosive Limit): | 4.1% (Hydrogen) | UEL (Upper Explosive Limit): | 74.2% (Hydrogen) |
| | Electrolyte | | | | | | | | | | | | | | | | | | | | | | | | |
| pH: | ~ 1 – 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Specific gravity (H₂O=1): | 1.215 – 1.350 | | | | | | | | | | | | | | | | | | | | | | | | |
| Boiling point: | 203 – 240°F | | | | | | | | | | | | | | | | | | | | | | | | |
| Melting point: | N/A | | | | | | | | | | | | | | | | | | | | | | | | |
| Vapour Pressure (mm Hg): | 10 | | | | | | | | | | | | | | | | | | | | | | | | |
| Vapour Density (Air = 1): | Greater than 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solubility in Water: | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| Reactivity in water | Electrolyte is water reactive | | | | | | | | | | | | | | | | | | | | | | | | |
| Flash point: | Below room temperature (as hydrogen gas) | | | | | | | | | | | | | | | | | | | | | | | | |
| LEL (Lower Explosive Limit): | 4.1% (Hydrogen) | | | | | | | | | | | | | | | | | | | | | | | | |
| UEL (Upper Explosive Limit): | 74.2% (Hydrogen) | | | | | | | | | | | | | | | | | | | | | | | | |

10) Stability and reactivity:

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| 10.1 Reactivity | If inner cell case is damaged, the Sulfuric Acid electrolyte may become violently reactive with strong reducing agents, also could result in chemical burns, or corrosion. Hydrogen gas released during charging could result in explosion. |
| 10.2 Chemical stability | This product is stable under normal conditions at ambient temperature. |
| 10.3 Possibility of hazardous reactions | Active components have additional mechanical protection from the battery case. |
| 10.4 Conditions to avoid | Prolonged overcharge. Sources of ignition. Short circuit. Heat above 90°C or incinerate. Deform, mutilate, crush, pierce, disassemble. Prolonged exposure to humid conditions. |
| 10.5 Incompatible Materials | <u>Sulfuric Acid:</u> Contact with combustibles & organic materials may cause fire & explosion. Also reacts violently with strong reducing agents metals, sulfur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. <u>Lead Compounds:</u> Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents. |
| 10.6 Hazardous decomposition products | <u>Sulfuric Acid:</u> Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen sulphide. <u>Lead Compounds:</u> High temperatures likely to produce toxic metal fume, vapour, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas. |

11) Toxicological information:

11.1 Information on toxicological effects:

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| Routes of Entry: | Sulfuric Acid: Harmful by all routes of entry. Lead Compounds: Hazardous exposure can occur only when product is heated, oxidized or otherwise processed or damaged to create dust, vapour or fume. The presence of nascent hydrogen may generate highly toxic arsine gas. |
| Inhalation: | Sulfuric Acid: Breathing of sulfuric acid vapours or mists may cause severe respiratory irritation. Lead Compounds: Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs. |
| Ingestion: | Sulfuric Acid: May cause severe irritation of mouth, throat, oesophagus & stomach. Lead Compounds: Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhoea and severe cramping. This may lead rapidly to systemic toxicity and must be treated by a physician. |
| Skin Contact: | Sulfuric Acid: Severe irritation, burns and ulceration. Lead Compounds: Not absorbed through the skin. |

SAFETY DATA SHEET (SDS)

VALVE REGULATED LEAD ACID, SEALED, NON-SPILLABLE BATTERY

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| Eye Contact: | Sulfuric Acid: Severe irritation , burns, cornea damage, and blindness. Lead Components: May cause eye irritation. |
| Effects of Overexposure - Acute: | Sulfuric Acid: Severe skin irritation, damage to cornea, upper respiratory irritation. Lead Compounds: Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscle aches and weakness, sleep disturbances and irritability. |
| Effects of Overexposure - Chronic: | Sulfuric Acid: Possible erosion of tooth enamel, inflammation of nose, throat and bronchial tubes. Lead Compounds: Anaemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage; reproductive changes in males and females. Repeated exposure to lead and lead compounds in the workplace may result in nervous system toxicity. Some toxicologists report abnormal conduction velocities in persons with blood lead levels of 50mcg/100 ml or higher. Heavy lead exposure may result in central nervous system damage, encephalopathy and damage to the blood-forming (hematopoietic) tissues. |
| Carcinogenicity: | Sulfuric Acid: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Group 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist. Lead Compounds: Lead is listed as a Group 2A carcinogen, likely in animals at extreme doses. Per the guidance found in OSHA 29 CFR 1910.1200 Appendix F, this is approximately equivalent to GHS Category 1B. Proof of carcinogenicity in humans is lacking at present. |
| Medical Conditions Generally Aggravated by Exposure: | Overexposure to sulfuric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of sulfuric acid with skin may aggravate diseases such as eczema and contact dermatitis. Lead and its compounds can aggravate some forms of kidney, liver and neurologic diseases. |

12) Ecological information:

Environmental Toxicity & Fate:

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|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.1 Toxicity: (Aquatic) | When properly used or disposed of, the Sealed Lead Acid batteries do not present environmental hazards. Sulfuric acid: 24-hr LC50, freshwater fish (Brachydanio rerio): 82 mg/L 96 hr- LOEC, freshwater fish (Cyprinus carpio): 22 mg/L Lead: 48 hr LC50 (modelled for aquatic invertebrates): <1 mg/L, based on lead bullion |
| 12.2 Persistence and degradability: | Lead is very persistent in soil and sediments. No data on environmental degradation. |
| 12.3 Bio-accumulative potential: | Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants but little bioaccumulation occurs through the food chain |
| 12.4 Mobility in soil | Mobility of metallic lead between ecological compartments is slow |
| 12.5 Results of PBT and vPvB assessment: | N/A |
| 12.6 Other adverse effects | No known effects on stratospheric ozone depletion. Volatile organic compounds (VOC): 0% (by Volume) Water Endangering Class (WGK): NA |

13) Disposal considerations:

- Do NOT mix used batteries with general rubbish.
- Do NOT dump batteries into any sewers, on the ground, or into any body of water.
- Battery recycling is encouraged. In Europe waste batteries must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. End-users are invited to dispose them properly, eventually through not-for-profit organizations, mandated by local governments or organized on a voluntary basis by professionals.

13.1 Waste treatment methods:

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| Recycling : | Send to authorized recycling facilities, eventually through licensed waste carrier. |
| Incineration : | Incineration should never be performed by battery users but eventually by trained professionals in authorized facilities with proper gas and fumes treatment. |
| Land filling : | Spent lead acid batteries are 100% recycled in lead refineries (secondary lead smelters). The components of spent lead acid batteries are recycled or re-processed. |

SAFETY DATA SHEET (SDS)

VALVE REGULATED LEAD ACID, SEALED, NON-SPILLABLE BATTERY

14) Transport information: (VRLA Batteries only)

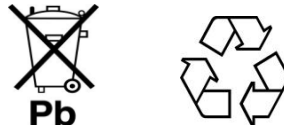
Under the "United Nations Recommendations these batteries are classified for international shipment as:

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| Land Transport (ADR/RID, US DOT) | UN number: UN2800 |
| | UN proper shipping name: BATTERIES, WET, NON SPILLABLE |
| | Transport hazard class(es): ADR/RID "Class 8" |
| | Packing group ADR: Not assigned |
| | Label required: Corrosive |
| | ADR/RID: New and spent batteries are excepted from all ADR/RID requirements provided the requirements of Special Provision 598 are met. |
| Sea Transport (IMDG Code) | UN number: UN2800 |
| | UN proper shipping name: BATTERIES, WET, NON SPILLABLE |
| | Transport hazard class(es): "Class 8" |
| | Packing group: Not assigned |
| | EmS: F-A, S-B |
| | Label required: Corrosive If non-spillable batteries meet the requirements of Special Provision 238, they are excepted from the IMDG codes provided that the batteries' terminals are protected against short circuits. |
| Air Transport (IATA-DGR) | UN number: UN2800 |
| | UN proper shipping name: BATTERIES, WET, NON SPILLABLE |
| | Transport hazard class(es): "Class 8" |
| | Packing group: Not assigned |
| | Label required: Corrosive If non-spillable batteries meet the testing requirements in Packing Instruction 872 and Special Provision A67, they are excepted from all the IATA DGR codes provided that the batteries' terminals are protected against short circuits. |

15) Regulatory information:

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

In accordance with the EU Battery Directive and the respective national legislation, lead-acid batteries have to be marked by a crossed out dust bin with the chemical symbol for lead shown below, together with the ISO return/recycling symbol.



In addition, some batteries may be labelled with some or all of the following hazard symbols:



Labelling might vary due to the application, design, dimension and country of sale of the batteries. The manufacturer, or importer of the batteries, shall be responsible for placing the symbols (a minimum size is specified).

15.2 Chemical safety assessment:

A chemical safety assessment has not been carried out by DMS technologies. The battery/ cell manufacturer has completed their evaluations.

SAFETY DATA SHEET (SDS)

VALVE REGULATED LEAD ACID, SEALED, NON-SPILLABLE BATTERY

15.3 EPA SARA Title III: (UNITED STATES)

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| <p>Section 302 EPCRA Extremely Hazardous Substances (EHS): Sulfuric acid is a listed "Extremely Hazardous Substance" under EPCRA, with a Threshold Planning Quantity (TPQ) of 1,000 lbs. EPCRA Section 302 notification is required if 1000 lbs or more of sulfuric acid is present at one site (40 CFR 370.10). For more information consult 40 CFR Part 355. The quantity of sulfuric acid will vary by battery type. Contact your supplier for additional information.</p> |
| <p>Section 304 CERCLA Hazardous Substances: Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (Superfund) and EPCRA (Emergency Planning and Community Right to Know Act) is 1,000 lbs. State and local reportable quantities for spilled sulfuric acid may vary.</p> |
| <p>Section 311/312 Hazard Categorization: EPCRA Section 312 Tier Two reporting is required for non-automotive batteries if sulfuric acid is present in quantities of 500 lbs or more and/or if lead is present in quantities of 10,000 lbs or more. For more information consult 40 CFR 370.10 and 40 CFR 370.40.</p> |
| <p>Section 313 EPCRA Toxic Substances: 40 CFR section 372.38 (b) states: If a toxic chemical is present in an article at a covered facility, a person is not required to consider the quantity of the toxic chemical present in such article when determining whether an applicable threshold has been met under § 372.25, § 372.27, or § 372.28 or determining the amount of release to be reported under § 372.30. This exemption applies whether the person received the article from another person or the person produced the article. However, this exemption applies only to the quantity of the toxic chemical present in the article. Supplier Notification: This product contains toxic chemicals, which may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. If you are a manufacturing facility under SIC codes 20 through 39, the information provided in Section 3 of this document should enable you to complete the required reports. Also see 40 CFR Part 370 for more details. If you distribute this product to other manufacturers in SIC Codes 20 through 39, this information must be provided with the first shipment of each calendar year. The Section 313 supplier notification requirement does not apply to batteries, which are "consumer products".</p> |
| <p>TSCA: TSCA Section 8b – Inventory Status: All chemicals comprising this product are either exempt or listed on the TSCA Inventory. TSCA Section 12b (40 CFR Part 707.60(b)) No notice of export will be required for articles, except PCB articles, unless the Agency so requires in the context of individual section 5, 6, or 7 actions. TSCA Section 13 (40 CFR Part 707.20): No import certification required (EPA 305-B-99-001, June 1999, Introduction to the Chemical Import Requirements of the Toxic Substances Control Act, Section IV.A).</p> |
| <p>RCRA: Spent Lead Acid Batteries are subject to streamlined handling requirements when managed in compliance with 40 CFR section 266.80 or 40 CFR part 273. Waste sulfuric acid is a characteristic hazardous waste; EPA hazardous waste number D002 (corrosivity) and D008 (lead).</p> |
| <p>CAA: The manufacturer supports preventative actions concerning ozone depletion in the atmosphere due to emissions of CFC's and other ozone depleting chemicals (ODC's), defined by the USEPA as Class I substances. Pursuant to Section 611 of the Clean Air Act Amendments (CAAA) of 1990, finalized on January 19, 1993, the manufacturer established a policy to eliminate the use of Class I ODC's prior to the May 15, 1993 deadline.</p> |
| <p>STATE REGULATIONS (US): 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. Batteries also contain other chemicals known to the State of California to cause cancer. Wash hands after handling.</p> |
| <p>INTERNATIONAL REGULATIONS: Distribution into Quebec to follow Canadian Controlled Product Regulations (CPR) 24(1) and 24(2). Distribution into the EU to follow applicable Directives to the Use, Import/Export of the product as-sold.</p> |

16) Other information:

This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty (either expressed or implied) or guaranty is made to the accuracy, reliability or completeness of the information contained herein.

This information relates to the specific materials designated and may not be valid for such material used in combination with any other materials or in any process. It is the user's responsibility to satisfy themselves as to the suitability and completeness of this information for their particular use.

The Manufacturer does not accept liability for any loss or damage that may occur, whether direct, indirect, incidental or consequential, from the use of this information. The Manufacturer does not offer warranty against patent infringement.

Additional information is available by calling the telephone number above.