Section 1 – Chemical Products and Company Identification

Product name/Product identifier: Maintenance Free Sealed Lead Acid Battery

Model: BW-27 AGM, B12-90

UNID No.: Complies with UN2800 Classification

Details of the supplier safety data sheet: Glentronics, Inc.
645 Heathrow Drive
Lincolnshire IL 60069

Emergency Telephone number:
Company phone number               800-991-0466
Emergency Telephone (24 Hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

Section 2 – HAZARDS IDENTIFICATION

Classification
Irritation to eyes and skin
Serious eye damage/eye irritation
Causes burns

Hazards Not Otherwise Classified (HNOC)
Harmful if swallowed.

This battery has passed the vibration test, pressure differential test and leakage test at 55 degrees C according to recommendations on the transport of dangerous goods model registration (15th) special provision 238. It is not restricted to IATA DGR according to special provision A67 and is not restricted to IMGD code according to special provision 238.

Signal Word
Danger

Hazard Statements
Causes skin burns and severe irritation to eyes

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wear respiratory protection
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Immediately call a poison center or doctor/physician

Eye Exposure: Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call poison control or doctor/physician
Skin/Hair Exposure: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician

Swallowed: Rinse mouth. Do not induce vomiting. Immediately call a poison center or doctor/physician

Precautionary Statements - Storage
Store in a cool well ventilated area. Keep away from ignition sources, heat and flame. Batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Materials to avoid: Strong oxidant, combustible materials and corrosives.

Precautionary Statements - Disposal
Dispose of item with an approved waste disposal facility

---

### Section 3 – INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inorganic Lead/Lead Compounds</td>
<td>7439-92-1</td>
<td>~ 72%</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>7664-93-9</td>
<td>~ 20%</td>
</tr>
<tr>
<td>Fiberglass Separator</td>
<td>65997-17-3</td>
<td>~ 2%</td>
</tr>
<tr>
<td>Container Plastics (ABS or PP)</td>
<td>9003-56-9 (ABS)</td>
<td>~ 5%</td>
</tr>
</tbody>
</table>

---

### Section 4 – FIRST-AID MEASURES

**First Aid Measures**

**General Advice**
Provide SDS to medical personnel for treatment

**Eye Contact**
Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call poison control or doctor/physician

**Skin Contact**
Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

**Inhalation**
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician

**Ingestion**
Rinse mouth. Do not induce vomiting. Immediately call a poison center or doctor/physician

**Most important symptoms and effects**
Causes skin burns and severe irritation to eyes

**Indication of any immediate medical attention and special treatment needed**

**Note to Physician**
Continued washing of the affected area with cold water will be helpful in removing the last traces of sulfuric acid. Creams or ointments should not be applied before or during the washing phase of treatment

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### Section 5 – FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**
Dry chemical, sandy soil, carbon dioxide or appropriate foam.
Unsuitable Extinguishing Media
Not determined

Specific Hazards Arising from the Chemical
Emit toxic fumes under fire conditions

Protective equipment and precautions for firefighters
Wear self contained breathing apparatus pressure demand, MSHA/OSHA (approved or equivalent) and full protective gear to prevent contact with skin or eyes.

Section 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions
Wear protective clothing as described in section 8. Ventilate affected area

Environmental Precautions
Prevent from entering into the soil, ditches, sewers, waterways and or groundwater. See section 12 for additional information.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so. Soak up and contain spill with an inert (i.e. vermiculite, dry sand or earth) absorbent material. Neutralize runoff with lime, soda ash, etc.

Methods for Clean-Up
Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.

Prevention of Secondary Hazards
Material can create slippery conditions.

Section 7 – HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling
Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Follow all SDS/label precautions even after container is emptied, because it may retain product residues. Do not breathe vapors or spray mist. Do not eat, drink or smoke when handling this product. Use only with adequate ventilation. Wear respiratory protection. Loosen closure carefully; relieve internal pressure when received and at least weekly thereafter. Do not use pressure to empty. Do not wash out container or use it for other purposes. Replace closure after each use.

Keep away from ignition sources, heat and flame. Batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Materials to avoid: Strong oxidant, combustible materials and corrosives.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed and store in a cool, dry and well-ventilated place. Store away from incompatible materials. Store locked up.

Keep away from ignition sources, heat and flame. Batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Materials to avoid: Strong oxidant, combustible materials and corrosives.

Incompatible Materials
Vigorous reactions with water; alkaline solutions; metals, metal powder; carbides; chlorates; nitrates; strong oxidizing, reducing, or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, and carbides.
Section 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>TWA: 0.2 mg/m³ thoracic fraction</td>
<td>TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³</td>
<td>IDLH: 15 mg/m³ TWA: 1 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Use chemical safety goggles and/or a full face shield.

Skin and Body Protection
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory
If the exposure limit is exceeded and engineering controls are not feasible, a full-face respirator with an acid gas cartridge and particulate filter (NIOSH type R100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P particulate filter. For emergencies or instances where the exposure levels are not known, use a full-face shield positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres. Where respirators are required, you must have a written program covering the basic requirements in the OSHA respirator standard. These include training, fit testing, medical approval, cleaning, maintenance, cartridge change schedules, etc. See 29CFR1910.134 for details.

General Hygiene Considerations
Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

Section 9 – PHYSICAL/CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
<td>Odor</td>
</tr>
<tr>
<td>Color</td>
<td>Clear</td>
<td>Odor Threshold</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>&lt; 1.0</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>10% - (25°F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>51% - (-30°F)</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>10% - (210°F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>51% - (270°F)</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Will not burn, non-flammable</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>&lt; 1.0</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>
Vapor Pressure < 0.3 mmHg @ 25°C (77°F)
Vapor Density 3.4 (Air=1)
Specific Gravity 1.058-1.409 @ 60°F
Water Solubility Completely soluble
Solubility in other solvents Not determined
Partition Coefficient Not determined
Auto-ignition Temperature Not combustible
Decomposition Temperature Not determined
Kinematic Viscosity Not determined
Dynamic Viscosity 20°C 25mPas 0°C 60mPas
Explosive Properties Not an explosive
Oxidizing Properties Not determined

**Section 10 – STABILITY AND REACTIVITY**

**Reactivity**
Not reactive under normal conditions

Will react with water or steam to produce toxic and corrosive fumes. Reacts with carbonates to generate carbon dioxide gas, and with cyanides and sulfides to form poisonous hydrogen cyanide and hydrogen sulfide respectively

**Chemical Stability**
Stable under ordinary conditions of use and storage. Concentrated solutions react violently with water, spattering and liberating heat.

**Possibility of Hazardous Reactions**
None under normal processing.

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Conditions to Avoid**
Avoid heat, sparks, open flames and other ignition sources. Heat, moisture, incompatibles. Keep separated from incompatible substances.

**Hazardous Decomposition Products**
Releases sulfur dioxide at extremely high temperatures. Toxic fumes of oxides of sulfur when heated to decomposition.

**Section 11 – TOXICOLOGY INFORMATION**

**Information on likely routes of exposure**

**Product Information:**

**Eye Contact** Causes severe eye damage.

**Skin Contact** Causes severe skin burns.

**Inhalation** May cause irritation to the mucus membranes and upper respiratory tract.

**Ingestion** May be harmful if swallowed.

**Component information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid</td>
<td>= 2140 mg/kg (Rat)</td>
<td>-</td>
<td>= 510 mg/m³ (Rat) 2 h</td>
</tr>
</tbody>
</table>

7664-93-9
Information on physical, chemical and toxicology effects

Symptoms
Please see section 4 of this SDS for symptoms

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity
IARC has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid. Inorganic mist is not generated under normal use of this product.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)
Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Numerical measures of toxicity
Not determined

Section 12 – ECOLOGICAL INFORMATION

Ecotoxicity
An environment hazard cannot be excluded in the event of unprofessional handling or disposal.

Lead and its compounds can result in a threat if released into the environment.

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

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7667-93-9</td>
<td>500: 96 h Brachydiariore rerio mg/L LC50 static</td>
<td>29: 24 h Daphnia magna mg/L EC50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability
When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined
Section 13 – DISPOSAL CONSIDERATIONS

Waste Treatment Methods
Disposal of Wastes:
Lead-acid batteries are completely recyclable. Return whole scrap batteries to distributor, manufacturer or lead smelter for recycling. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact local and/or state environmental officials regarding disposal information.

Contaminated Packaging:
For neutralized spills, place residue in acid-resistant containers with sorbent material, sand or earth and dispose of in accordance with local, state and federal regulations for acid and lead compounds. Contact local and/or state environmental officials regarding disposal information.

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid</td>
<td>Toxic</td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Corrosive</td>
</tr>
</tbody>
</table>

Section 14 – TRANSPORT INFORMATION

Note:
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
UN/ID No UN2800
Proper Shipping Name Batteries, wet, non-spillable, and electrical storage
Hazard Class 8
Packing Group III
Reportable Quantity (RQ) 1000 lbs

IATA
UN/ID No UN2800
Proper Shipping Name Batteries, wet, non-spillable, and electrical storage
Hazard Class 8
Packing Group III

IMDG
UN/ID No UN2800
Proper Shipping Name Batteries, wet, non-spillable, and electrical storage
Hazard Class 8
Packing Group III

Section 15 – REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Listed</td>
</tr>
<tr>
<td>DSL</td>
<td>Listed</td>
</tr>
<tr>
<td>NDSL</td>
<td>Listed</td>
</tr>
<tr>
<td>EINECS</td>
<td>Listed</td>
</tr>
<tr>
<td>ELINCS</td>
<td>Listed</td>
</tr>
<tr>
<td>ENCS</td>
<td>Listed</td>
</tr>
<tr>
<td>KECL</td>
<td>Listed</td>
</tr>
<tr>
<td>PICCS</td>
<td>Listed</td>
</tr>
<tr>
<td>AICS</td>
<td>Listed</td>
</tr>
</tbody>
</table>

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECS - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>1000 lb.</td>
<td>1000 lb.</td>
<td>RQ 1000 lb final RQ RQ 454 kg final RQ</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: Yes

SARA 313

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid - 7664-93-9</td>
<td>7664-93-9</td>
<td>1-51</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA -Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>1000 lb.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
### Section 16 – OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>0</td>
<td>2</td>
<td>W</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>0</td>
<td>2</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>

Issue Date: 02-Feb-2015
Note: New format


**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**