# RS POWER Sealed Lead Acid Batteries

**Material Safety Data Sheet**
Date: Feb 1st 2014
Rev. 1
Issued by: ADA

## Section 1- Chemical Product and Company Identification

**Product: Sealed Lead Acid rechargeable battery (non-spillable)**
**Model No.**
RS65, RS67, RS68, RS610, RS612, RS125, RS127, RS1212, RS1218, RS1226, RS1226, RS1233, RS1240, RS1275, RS1290, RS12110
**Manufactured for:**
RS POWER Batteries
150 Superior Blvd, Mississauga, ON L5T 2L2
**Emergency Phone Number:**
1-800-535-5053 (Infotrac)
**Emergency Overview:**
Exposure not expected for product under normal conditions of use. In its manufactured and supplied state, the product is non-hazardous. Keep away from flames during and immediately after charge. No significant effects are associated with the product.

## Section 2- Hazards Identification

**Hazards Rating (HMIS System) for Sealed Lead Acid Battery**

| | |
|---|---|
| Health | 0 |
| Flammability | 0 |
| Reactivity | 0 |

**Potential Health Effects**
None expected for finished product under normal conditions use.
**Fire and Explosion**
The sealed lead acid battery is not considered flammable, but it will burn if involved in a fire. Short circuit can also result in fire. Evacuate area. Self-contained apparatus must be worn to prevent possible inhalation of acid mists, smoke and decomposition products in a fire. Remove all ignition sources. Cool battery(s) to prevent rupture.

## Section 3- Composition (Hazardous Components)

| Components | % by Weight | TLV | LD50 Oral | LC50 Inhalation | LC50 Contact |
|---|---|---|---|---|---|
| **Lead (Ph,PbO2, PbSo** | **about 70%** | **N/A** | **(500)mg/kg** | **N/A** | **N/A** |
| **Sulfuric Acid** | **about 20%** | **1mg/m3** | **(2140)mg/kg** | **N/A** | **N/A** |
| **Fiberglass Separator** | **about 5%** | **N/A** | **N/A** | **N/A** | **N/A** |
| **Styro R478 (Polystyrene)** | **about 5%** | **N/A** | **N/A** | **N/A** | **N/A** |

## Section 4 - First Aid Measures

**Sulfuric Acid Precautions**

Skin contact: Flush with water, see physician if contact area is larger or if blister form.

Eye contact: Call physician immediately and flush with water until physician arrives.

Ingestion: Call physician. If patient is conscious, flush mouth with water, have the patient drink milk or sodium bicarbonate solutions.

DO NOT GIVE ANYTHING TO AN UNCONSCIOUS PERSON.

## Section 5 – Fire Fighting Measures

**Extinguishing Media**

Multi purpose dry chemical or multi purpose CO2.

**Fire Fighting Procedures**

Evacuate area. Self-contained breathing apparatus must be worn to prevent possible inhalation of acid mists, smoke and decomposition products in a fire. Remove all ignition sources. Cool battery(s) to prevent rupture.

**Unusual Fire and Explosion Hazards**

Hydrogen gas maybe produced and may explode if ignited. Remove all ignition sources. Ventilate area.

## Section 6 – Accidental Release Measures

**Leakage or Spill**

If sulphuric acid is spilled from a battery – Neutralize acid with sodium bicarbonate (baking soda), sodium carbon (soda ash), or calcium oxide (lime). Flush the area with water and discard to the sewage system. Do not allow unneutralized acid into sewage system.

**Waste Disposal**

Neutralized acid may be flushed down the sewer. Spent batteries must be treated as hazardous waste and disposal of according to local State or Province and federal regulations. A copy of this material safety data must be supplied to any scrap dealer or secondary lead smelter with battery.

## Section 7 – Handling and Storage

**Handling**

Do not carry battery by terminals. Do not drop battery, puncture or attempt to open battery case. Keep away from flame during and immediately after charge. Avoid prolonged overcharges in confined areas.

**Storage**

Store at ambient room temperature. Do not subject product to open flame or fire. Avoid conditions, which could cause arcing between battery terminals.

**Hygiene**

Wash hands thoroughly before eating or smoking after handling batteries.

## Section 8 – Exposure Controls/Personal Protection

**Lead**

The toxic effects of the lead are accumulative and slow to appear. It affects the kidneys, reproductive nerve system. The symptoms of lead over exposure are anemia, vomiting, headache, stomach pain (lead colic), dizziness, loss of appetite and muscle and joint pain. Exposure to lead from battery most often occurs during lead reclaim operations through the breathing or ingestion of lead dust and fumes.

Lead compounds exposure limits is 0.05 mg/m3 OSHA.

THIS DATA MUST BE PASSED TO ANY SCRAP DEALER OR SMELTER WHEN BATTERY RESOLD.

**Sulfuric Acid**

Sulfuric acid is a strong corrosive. Contact with acid can cause severe burns on the skin and eyes. Ingestion of sulfuric acid will cause GI tract burns. Acid can be released if the battery case is damaged or if the vents are tampered with.

Sulfuric Acid Electroyte exposure limits are 1.00 mg/m3 OSHA.

**Fiberglass Separators**

Fiberglass is an irritant of the upper respiratory tract, skin and eyes. For exposure up to 10F/CC, MSA Comfoll with type H filter. Above 10F/CC up to 50F/CC use ultra twin type H filter. NTP or OSHA does not consider this product carcinogenic.

**Personal Protection**

| | |
|---|---|
| Eye: | Not necessary under normal conditions of use for finished product. |
| Skin: | Not necessary under normal conditions of use for finished product. |
| Respiratory: | Not necessary under normal conditions of use for finished product. |
| Ventilation: | Not necessary under normal conditions of use for finished product. |
| Work Practices: | Not necessary under normal conditions of use for finished product. |

## Section 9 – Physical and Chemical Properties

**Physical Data**

| Component | Density | Melting Points | Solubility (H20) | Odor | Appearance |
|---|---|---|---|---|---|
| Lead | 11.34 | 327.4 $^{o}$C (boiling) | None | None | Silver-gray material |
| Lead Sulfate | 6.2 | 107 $^{o}$C (boiling) | 40mg/1 (15 $^{o}$C) | None | White powder |
| Lead Dioxide | 9.4 | 290 $^{o}$C (boiling) | None | None | Brown powder |
| Sulfuric Acid | about 1.3 | about 114 $^{o}$C (boiling) | 100% | Acidic | Clear colorless liquid |
| Fiberglass Separator | N/A | N/A | Slight | Toxic | White fibrous glass |
| 478 Polystyrene | N/A | N/A | None | No odor | Solid |

**Flammability**

| Component | Flashpoint | Explosive Limits | Comments |
|---|---|---|---|
| Lead | None | None | |
| Sulfuric Acid | N/A | None | |
| Hydrogen | | 4%-74.2% | Sealed batteries can emit hydrogen only if over charged (float voltage>2.4VPC) |
| Fiberglass Separator | None | N/A | Toxic vapors may be released. In case of fire wear, self-contained breathing apparatus. |
| 478 Polystyrene | None | N/A | Temperatures over 300C (572F) may release combustible gas. In case of fire, wear positive pressure self-contained breath apparatus. |

## Section 10 – Stability and Reactivity

| | |
|---|---|
| Stability: | Stable |
| Conditions to avoid: | Avoid shorting, use only approved charging methods. Do not puncture battery case. |
| Hazardous reactions: | N/A |
| Decomposition products: | N/A |
| Hazardous Polymerization | Will not occur |

## Section 11, 12 – Toxicological and Ecological Information

**Threshold Limit Value**

Not applicable for finished product.

**Route of Entry**

Not applicable for finished product under normal conditions of use.

**Signs of Symptoms of Acute Exposure**

None expected for finished product under normal conditions of use.

**Chronic Exposure**

None expected for finished product under normal conditions of use.

**Medical Conditions Aggravated by Exposure**

None expected for finished product under normal conditions of use.

**Effects of Overexposure, Conditions to Avoid**

No exposure expected for finished product. However, do not puncture or open battery case. Acid electrolyte may be released. Use only standard charging methods. If overcharged, battery may release gases (Hydrogen and Oxygen).

**Carcinogen Listing**

NTS: no IARC: no OSHA regulated: N/A for finished product under normal conditions of use.

## Section 13 – Disposal Considerations

Send to a lead recycling facility that follows applicable Federal, Provincial, State and Local regulations for routine disposition of spent or damaged batteries. The distributor/user is responsible to know that "spent" and/or "damaged" batteries (scrap batteries) are disposed of in an environmentally sound way in accordance with all applicable Federal, Provincial, State and Local Environmental Regulations.

"RS Power" batteries are 100% recyclable by any licensed reclamation operation.

## Section 14, 15 – Regulatory and Transportation Information

According to the OSHA Hazard Communication Standard, Sealed Lead Acid Battery in its manufactured and supplied state is considered non-hazardous.

Sealed Lead Acid Battery is not a DOT or TC hazardous material.

## Section 16 – Supplemental Information

"RS Power" batteries comply with the regulations for dangerous goods. As per IMCO and IATA Dangerous Goods Regulations, 42nd Edition, Section 4.4, Special Provision A48 and A67.

Non-spillable batteries are considered to be non-dangerous if the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow at a temperature of 55 degrees C (130 degrees F), and if the terminals are protected from short-circuit when packed for transportation.

"RS Power" batteries do meet all the above criteria.