

## Material Safety Data Sheet

### SECTION I. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTITY: VRLA Rechargeable Lead Acid Batteries  
 PRODUCT SERIES: ALL REMCO product series  
 MANUFACTURER NAME: Remco Limited  
 COMPANY ADDRESS: 10/Floor Cheung Tak Industrial Building,  
 30 Wong Chuk Hang Road Aberdeen, Hong Kong  
 TELEPHONE: (852) 2555 1394  
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### SECTION II. HAZARDOUS INGREDIENTS/ IDENTITY INFORMATION

HARDARDOUS COMPONENTS	CAS#	OSHA PEL	ACGIH TLV	% BY WEIGHT
LEAD	7439-92-1	0.05mg/m <sup>3</sup>	0.15mg/m <sup>3</sup>	67-71%
TIN	7440-31-5	2.0mg/m <sup>3</sup>	2.0mg/m <sup>3</sup>	<0.1%
ALUMINUM	7429-90-5	N/A	10.0mg/m <sup>3</sup>	<0.01%
SULFURIC ACID	7664-93-9	1.0mg/m <sup>3</sup>	1.0mg/m <sup>3</sup>	6-7%
NON- HAZARDOUS INGREDIENTS				
WATER	7732-18-5	N/A	N/A	14-16%
CALCIUM	7440-70-2	N/A	N/A	0.01%
INERT COMPONENTS	N/A	N/A	N/A	7-12%

### SECTION III. PHYSICAL/ CHEMICAL CHARACTERISTICS

Appearance and Odor: N/A	Solubility in Water: N/A
Vapor Pressure: N/A	Specific Gravity: 1.308
Vapor Density: N/A	Evaporation Rate: N/A
Boiling Point: N/A	Melting Point: N/A

### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method):	N/A
Oxygen Index:	>32_
Flammable Limits In Air:	Lower: N/A, Upper: N/A
Flammability:	UL 94HB or UL94V0
Extinguishing Media:	Dry Chemical, Halon, or Carbon Dioxide
Special Fire Fighting Procedures:	N/A
Unusual Fire and Explosion Hazard	Hydrogen gas may be present. Hydrogen gas and acid mist is generated upon overcharge or in fires.
Special Firefighting Procedures:	Ventilate the area well. Wear SCBA and acid protective clothing

### SECTION V: REACTIVITY DATA

Stability:	Stable
Condition to Avoid:	Prolonged overcharging, sources of ignition
Compatibility (Materials to Avoid):	Sulfuric Acid: Contact with combustibles and organic materials any cause fire and explosion. Also reacts violently with strong reducing agents, metals, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.
Lead Compounds:	Contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas

## SECTION VI HEALTH HAZARD DATA

Routes of Entry:	Eyes, In Eyes, inhalation, Skin and Ingestion (Not Applicable under normal use.)
Health Hazards (Acute & Chronic):	Severe burns and eye damage from sulfuric acid electrolyte. Illness from sulfur oxide fumes. Contains lead which is known to cause birth defects or reproductive harm.
Carcinogen: N/A	NTP: No
IARC: NO	OSHA Regulated: No
Signs & Symptoms of Exposure:	Irritation and acid burns
Medical Conditions Generally Aggravated by Exposure:	N/A
Medical Emergency and First Aid Procedures:	
For Sulfur Oxide Fumes:	Disconnect batteries, evacuated and ventilate
External:	Flush areas contaminated by sulfuric acid electrolyte with water
Internal:	Drink large quantities of water or milk, followed by milk of magnesia, beaten eggs or vegetable oil.

## SECTION VII PRECAUTIONS FOR HANDLING

### Steps to be taken in case material is released or spilled:

Avoid contact with sulfuric acid electrolyte from battery. Flush with water.

### Waste Disposal Method:

Neutralize with solution of baking soda in water. Do not incinerate. Dispose with automotive battery scrap in accordance with local and federal regulations.

### Precautions to be taken in handling and storing:

Keep batteries and the spilled material away from children

Batteries with released electrolyte shall be sealed in polyethylene bags or non-metallic container.

Allow adequate ventilation, hydrogen gas may be given off during neutralization

## SECTION VIII HANDLING AND STORAGE

Store in a cool, dry area and away from combustibles. Do not store in sealed, unventilated areas. Avoid overheating and overcharging. Do not use organic solvents or other than recommended chemical cleaners on the batteries.

Other Precautions: Do not crack battery cases. Do not overcharge. Do not short circuit battery terminals. Keep lighted cigarettes, sparks, and filenames away from charging batteries

## SECTION IX CONTROL MEASURES

Respiratory	Protection: NIOSH approved acid mist respirator, if OSHA PEL is exceeded.
Ventilation:	Natural ventilation is sufficient under normal use and handling. To prevent buildup of hydrogen gas, 2-3 room air changes per hour is recommended.
Protective Gloves:	Rubber or Neoprene
Eye Protection:	Chemical goggles or safety glasses with side shields and a full face shield is recommended
Other Protective Equipment and Clothing:	Acid resistant apron or clothes.
Work/ Hygienic Practices:	Do not wear metallic jewelry when working with batteries. Use non-conductive tools only. Discharge static electricity prior to working on a battery. Maintain an eyewash, fire extinguisher and emergency communication device in the work area.

## SECTION X TRANSPORTATION INFORMATION

- Battery, Non-spillable, electric storage
- REMCO batteries are not regulated as Hazardous Material for transportation.
- REMCO batteries complies with the D.O.T. provisions listed in CFR 49, 173.159(d), therefore is not subject to hazardous shipping requirements.
- REMCO batteries meet the conditions in IATA / ICAO Special provision A67 for air transportation.
- REMCO batteries meet the conditions of IMDG special provision 238 for vessel transportation.