



Material Safety Data Sheet - Sun~Xtender Series Valve Regulated Battery

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SECTION 1 - PRODUCT IDENTIFICATION

PRODUCT NAME:	Valve Regulated Lead-acid Battery
COMMON SYNONYMS:	VRB, VRLA, Recombinant lead/acid battery; Chairman Series, AGM. U.S. DOT description: Battery, wet, non-spillable, 8, UN2800, PG III for p/n AGM-12210L & AGM-12255L. *All other AGM Series battery part numbers are exempt from DOT requirements as tested per 49CFR173.159(d) and are determined to be in compliance with U.S. DOT HMR49 as Non-Hazardous Materials, including IATA & IMDG
CHEMICAL FAMILY:	Lead-acid Storage Battery
FORMULA:	Not Applicable
PRODUCT USE:	Electric Storage Battery

SECTION 2 - HAZARDOUS INGREDIENTS

COMPONENT	CAS NO.	HAZARD CATEGORY	%	ACGIH TLV	OSHA PEL
Lead/Lead Oxide	7439-92-1	Acute/Chronic	85-90%	0.05 mg/m ³	0.05 mg/m ³
Sulfuric Acid/ Water Solution	7664-93-9	Acute/Chronic Corrosive Oxidizer	10-15%	0.5 mg/m ³	0.5 mg/m ³
Arsenic	7440-38-2	Acute/Chronic	<1%	0.2 mg/m ³	0.01 mg/m ³
Calcium	7440-70-2	Reactive	<0.15%	NA	NA

NOTE: Exposure to these materials will not occur under normal conditions of use. This product description or Trade name contains toxic chemicals subject to the reporting requirements under Section 313 of Title III "The Superfund Amendment and Reauthorization Act of 1986" and CFR 371 and California Proposition 65.

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT: NA	VAPOR PRESSURE (mm Hg): NA
MELTING POINT: Polypropylene > 320°F.	VAPOR DENSITY (Air = 1): NA
SPECIFIC GRAVITY: Lead, approx. 13	% VOLATILE BY VOLUME: None
SOLUBILITY IN WATER: NA	REACTIVITY IN WATER: NA
PHYSICAL STATE: Solid unit	PH: Not Applicable
APPEARANCE: Battery: Rectangular polypropylene case with metal terminals, may be contained within an outer casing of aluminum or steel. Lead/lead oxide (internal): Grey metallic solid; brown/grey oxide.	
FLASH POINT (CLOSED CUP): Polypropylene case - 675°F	
AUTO IGNITION TEMPERATURE: Not Applicable	
FLAMMABLE LIMITS IN AIR (% BY VOLUME): LOWER: NA UPPER: NA	
FIRE EXTINGUISHER MEDIA: Halon, dry chemical	
SPECIAL FIRE FIGHTING PROCEDURES: Batteries do not burn or burn with difficulty. Extinguish fire with agent suitable for surrounding combustible materials. Cool exterior of battery if exposed to fire to prevent release of lead compounds and fumes.	
UNUSUAL FIRE AND EXPLOSION HAZARDS: None	

SECTION 4 - PHYSICAL HAZARDS		
INCOMPATIBILITY (Materials to Avoid): Keep battery case away from strong oxidizers.		
STABILITY: Stable		
HAZARDOUS DECOMPOSITION PRODUCTS: None		
HAZARDOUS POLYMERIZATION: Will not occur.		
SECTION 5 - HEALTH HAZARDS		
THRESHOLD LIMIT VALUE (TLV):	Lead - 0.05 mg/m ³ Sulfuric Acid - 1 mg/m ³	Permissible exposure limit (PEL): 0.05 mg/m ³ Permissible exposure limit (PEL): 1 mg/m ³
SIGNS AND SYMPTOMS OF EXPOSURE: Exposure to sulfuric acid, lead, lead dioxide or lead sulfate may occur if the sealed battery case is damaged. Exposure to lead may include: 1. Chronic overexposure: Tire easily, loss of appetite, irritability, metallic taste, insomnia; toxic to nervous system, kidneys, and reproductive system. 2. Acute overexposure: Constipation, vomiting, blue line on gums, weak wrists or ankles, weight loss, yellowish skin. Exposure to sulfuric acid (battery electrolyte) may include: 1. Chronic overexposure: Inhalation - erosion of teeth, inflammation of nose, throat, bronchial tubes. 2. Acute overexposure: Eyes - severe burns, cornea damage, blindness. Skin - severe irritation, burns, ulceration. Inhalation - respiratory irritation, inflammation of bronchial membranes. Ingestion - severe burns and ulceration of the mouth, throat, esophagus and stomach, damage to kidney and intestinal tract.		
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Respiratory exposure to airborne sulfuric acid will aggravate lung damage or other pulmonary conditions. Harmful effects of lead are increased for a person with dietary deficiencies in calcium, iron, and zinc.		
ROUTES OF ENTRY: Lead - ingestion, inhalation. Sulfuric acid - skin, eyes, inhalation, ingestion.		
CARCINOGENICITY:	National Toxicology Program: None found OSHA: None found	I.A.R.C. Monographs: None found EPA CAG: Yes (lead)
EMERGENCY FIRST AID PROCEDURES: Lead/lead compounds exposure 1. Inhalation: Remove from exposure, see physician. 2. Eyes: (dry oxide) Wash eyes with copious quantity of running water for 15 minutes, see physician 3. Skin: Not a direct route of entry. 4. Ingestion: See physician. Sulfuric acid exposure: 1. Inhalation: Remove to fresh air, see physician immediately. If person is unconscious, perform CPR, keep victim warm and at rest, if breathing is difficult, give oxygen. 2. Eyes: Wash eyes with copious quantity of running water for 15 minutes or until acid is removed, see physician. 3. Skin: Remove all contaminated clothing, flush skin with copious quantity of water until free of acid. 4. Ingestion: Do not induce vomiting, do not give anything by mouth to an unconscious person, see physician immediately.		
PROPOSITION 65 WARNING: This product contains lead and lead compounds. Lead and lead compounds are chemicals known to the State of California to cause cancer. Lead is a chemical known to the State of California to cause birth defects and reproductive toxicity in both males and females.		
SECTION 6 - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION: If product is involved in fire, release of dust or fumes from damaged cases may result. Use of SCBA full face or half-mask respirator with HEPA cartridge would be recommended.		
VENTILATION: No		
PROTECTIVE GLOVES: Use leather or other protective gloves to minimize lead/lead oxide contamination if handling broken units.		
EYE PROTECTION: Safety glasses, face shield, or goggles for handling broken or damaged product.		
OTHER PROTECTIVE EQUIPMENT: None required.		
SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE		
PRECAUTIONS IN HANDLING AND STORAGE: Exercise caution in handling and storage due to weight of units.		
OTHER PRECAUTIONS: Do not allow metal or other conductive material to short circuit terminals. Heat, sparks, damage to electrical circuits, and fire may result from short circuiting. Practice good hygiene to minimize personal exposure. Battery may release hydrogen during charging or if exposed to high temperatures. Do not store in air tight container.		
MATERIAL SPILLS OR RELEASE: Will not occur unless sealed case is damaged. Pick up and containerize all battery parts and materials. Limit personal exposure with gloves, eye and face protection, as noted above. Neutralize sulfuric acid with lime, soda ash, or sodium bicarbonate.		
WASTE DISPOSAL: Battery parts may be recycled by EPA permitted secondary lead smelting facility or disposed of as hazardous waste pursuant to RCRA requirements.		
Date Prepared: 7/23/02	Preparer's Signature:	E. J. Mahoney

