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Zhejiang Just Electrical Appliances Co.,Ltd.

Material Safety Data Sheet

SOLAR BATTERY

12V65AH

12V100AH

12V120AH

12V150AH

12V200AH

12V250AH

Section 1 - Chemical Product and Company Identification

MSDS Name: SOLAR BATTERY 12V65AH 12V100AH 12V120AH 12V150AH 12V200AH 12V250AH

Synonyms: GEL BATTERY

Company Identification: Zhejiang Just Electrical Appliances Co.,Ltd.

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Section 2 - Composition, Information on Ingredients

Synonyms: GEL BATTERY

Cas: Mixture

Ingredient	CAS#	Max
Lead	7439-92-1	60%
Lead Oxide	1309-60-0	95%
Lead Sulfate	7446-14-2	

Section 3 - Hazards Identification

Ingredient	SARA applies			Air contaminant levels	
	302	311/312	313	AGGIHYTLV (mg/m³)	OSHA PEL (mg/m³)
Lead Lead Oxide Lead Sulfate	N	Y	Y	0.15	0.05

Section 4 - First Aid Measures

SKIN: Remove from source. Wash thoroughly with soap and water. Treat as acid burn. If acid is splashed in shoes, remove immediately and discard. Remove contaminated clothing and obtain medical attention.
EYES: Flush thoroughly with cool water for 15 minutes, lifting lids. Get medical attention. Treat as an acid burn.

INHALATION: Remove to ventilated area. Get medical attention.

INGESTION: Lead/lead compounds: consult physician. Do not induce vomiting,keep quiet, get medical attention immediately.

Section 5 - Fire Fighting Measures

Flash Point (method used): NA tFlammable Limits: Lead acid batteries will not burn or will burn with difficulty. Hydrogen gas may be

flammable and explosive when mixed with oxygen, air or chlorine. Hydrogen LEL: 4 %; UEL: 74.2 % tExtinguishing Media: Halon, dry

chemical, foam or CO2. Cool exterior of batteries exposed to fire to prevent ruptures. t Unusual Hazards: Hydrogen and oxygen gases

are generated in the cells during normal battery operations. These gases enter the air through the vent caps. Keep ignition sources away

from the battery. Sulfuric acid mist and vapors generated by battery overcharge, heat or fire are corrosive. Ensure proper ventilation

of charging areas consistent with OSHA (CFR 1910 and 1926), National Fire Code, ACGIH and other relevant standards. t Special

Fire Fighting Procedures: Use positive pressure, self-contained breathing apparatus and protective clothing. Extinguish fire with material suitable for surrounding combustible materials.

Fire/Explos. Not applicable

Hazard

Fire Fighting LEL = 4.1% (Hydrogen gas in air)

Procedures U2EL = 74.2%

Extinguishing CO2 : foam, dry chemical

Media
Hazardous Sulphuric acid is water-reactive if concentrated

Reaction

Hazchem Code 4Y (black on white) E

Section 6 - Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Stop leak at source. Ventilate the area. Remove combustible material

and all sources of ignition. Wear protective clothing, acid resistant boots and gloves, face shield and goggles. Segregate the spill and

neutralize with baking soda, soda ash, lime or use an appropriate acid absorbent. Collect residue in an approved container. Do not release to streams, lakes, sewer, etc.

Waste Disposal Method: Return spent batteries to distributor, manufacturer or lead recycler. Neutralize acid spill or use proper

absorbent and place waste in proper container. Cracked or leaking batteries being recycled must be stored and shipped in a container

that is sturdy, acid resistant, leak proof and kept closed. Dispose of batteries and components according to all local, state and federal

regulations. Some states regulate leaking batteries as hazardous waste, classification D002 (corrosive) and D008 (lead) even when recycled.Check with state authorities.

Section 7 - Handling and Storage

Such batteries must be packed in inner packagings in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Storage Requirements: Store lead acid batteries in cool, dry and properly ventilated area. Make sure vent caps are in place. Keep the

batteries from extreme heat or freezing. Place a minimum of two layers of corrugated cardboard between battery layers for storage.

Protect terminals to prevent short circuits. Keep out of reach of children.

Section 8 - Exposure Controls, Personal Protection

Respiratory Protection: None required under normal handling conditions. During battery formation or recharge, acid mist may be generated. If irritation occurs use a suitable respirator for protection. t Ventilation: Store lead acid batteries in cool, dry and properly ventilated area. Never recharge batteries in a closed, unventilated area. t Protective Gloves: Acid resistant rubber or plastic gloves.

Eye Protection: Wear chemical safety goggles or faceshield during non-routine tasks, including battery maintenance. t Other Protective

Clothing or Equipment: Eye wash and safety shower installed near to storage or charging area, safety shoes with rubber or neoprene boots and aprons. t
Work/Hygienic Practices: Make sure vent caps are tight. Do not smoke or use open flames in charging area. Wash your skin thoroughly after handling battery. Discard contaminated clothing according to state or EPA regulations.symptoms are experienced.

Section 9 - Physical and Chemical Properties

	Lead	**Hydrogen**	**Plastic/Battery case**
Boiling Point	1755c	-252c	
Vapor Pressure			
Vapor Density		-0.07c	
Melting Point	327.4c	-259c	
Specific Gravity			
Evaporation Rate	Not determined		
Solubility in Water			
Appearance and Odor	Acid satura led lead oxide is dark reddish-brown gray solid with acidic odor.	Colorless,odorless gas.	solid
Ph:			

Section 10 - Stability and Reactivity

Stable V

Conditions to Avoid: Avoid overcharging battery. Do not allow smoking, open flame or sparks near batteries while charging. Avoid high temperature. Keep battery case away from strong oxidizers.

Incompatibility: Lead/lead compounds: potassium, carbides, peroxides, hosphorus, sulfur. Battery case: strong oxidizing agents. Short circuits may result in fire.

Hazardous Decomposition/ Byproducts: An explosive hydrogen and oxygen mixture within the battery may be generated during charging. Sanding and grinding of battery posts, post building and connector burning activities will release airborne lead.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

Acute Health Effect: Overexposure to lead compounds may cause upset stomach, loss of appetite, sleeplessness, and fatigue.

Chronic Health Effects: Lead compounds may cause chronic anemia, kidney and nervous system damage. Lead may also cause reproductive system damage.
Carcinogenicity: Under normal battery use, sulfuric acid mist is not generated.NTP and IARC have classified lead as an animal carcinogen (A3). While the lead is carcinogenic in experimental animals at relatively high doses, lead is unlikely cause cancer in humans except under uncommonly high levels of exposure.

Signs/Symptoms of Exposure: Under normal battery use, the components do not present a health hazard. Under abnormal conditions or in case of fire, breakage or overcharge, battery can cause the following symptoms:

SKIN: Irritation or skin burn. EYES: Burning. INGESTION: upset stomach, fatigue, irritation or burn in the mouth and the gastrointestinal system. INHALATION:

Breathing the acid vapor may cause respiratory difficulties.

Section 12 - Ecological Information

Electric capacity: 36F

Voltage: 36V

Section 13 - Disposal Considerations

It is illegal to discard batteries in the trash. State laws require batteries to be recycled by a permitted recycling facility. Batteries should be returned to the manufacturer or distributor for recycling, or directly to a permitted recycling facility.

Recycle batteries should be palletized.

Heavier batteries are on bottom layer on pallet.

Arrange layers to avoid pallet overhang.

Minimum of two (2) sheets of corrugated cardboard between layers or one (1) honeycomb layer sheet.

Keep battery layers reasonably flat for top loading.

Limit each pallet to three (3) layers of batteries.

Keep battery terminals aligned to prevent short circuits; no side terminal contact.
No exposed terminals.

Stretch wrap or banding is mandatory. No steel strapping.

Section 14 - Transport Information

Not classified as hazardous under transport regulations (ADR RID IMDG/GGVSee ICAO/IATA) Hazardous good only when carried in inland waterway tanker (ADNR) IMO NOT REGULATED

Section 15 - Regulatory Information

The substance presents no explosive hazard.

The screening test of flammability is conducted in accordance with the Regulation,

The result indicates that the substance does not belong to flammable solid.

The substance does not belong to oxidizing substances.

The substance does not belong to Radioactive Material.

The substance does not belong to corrosives.

Section 16 - Additional Information

The information and recommendations presented herein are based on sources believed to be reliable as of the date hereof. Superior makes no representation as to the completeness or accuracy thereof. It is the user's responsibility to determine

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