ASIA SOURCES HONG KONG, LTD.

Material Safety Data Sheet

Data Sheet No: VRLA AGM Issue 8

Date Issued: January 1th, 2019

1 Identification of the substance

Product name: Sealed Lead Acid Battery

Trade name: PB Premium Battery

MODEL:PB,PBC & PBX Series

1. Manufacturers Name: Asia Sources Hong Kong, Ltd

Manufacturers Address: 917 Goldfield Industrial Centre, 1 Sui Wo Road, Fotan-Shatin, Hong Kong

2. Manufacturers Name: Asia Sources H.K., Ltd

Manufacturers Address: Xiwang RD, Aicheng Industry Park, Yongxiu, JiuJiang, China

E mail: _rsg@asiasources.hk Tel: (86) 0791-85989842

Responsible persons: Technical Director Daihui Zhou

2 Composition / Ingredient Data

Hazardous Components Chemical Identity	CAS Number	OSHA PEL	ACGIH TLV	Percent By Weight	EC Number	Average
Lead	7439-92-1	50 μg/m ₃	50 μg/m ₃	45-55%	231-100-4	50%
Sulfuric Acid	7664-93-9	100 μg/m ₃	1.00 mg/m₃	19-25%	231-639-5	22%
Lead Oxide	1309-60-0	50 μg/m ₃	500 μg/m ₃	19-23%	215-174-5	21%

	Risk Phrases	Safety Phrases
Sulphuric Acid	R61,62,20/22,33	S1/2,S26,S30,S45
Lead Oxide	R35	None

3 Hazards Identification

Classification of the substance or mixture according to Regulation (EC) No 1272/2008 [CLP/GHS] Material is an article. No health effects are expected during normal use of this product as sold. Hazardous exposure may occur when the product is heated, oxidized or otherwise processed, damaged or subjected to misuse. Follow manufacturer's instructions for installation, service and use.

Health

GHS code	Hazard class/category		Hazard statements	2008/98/EC code	Labels
H302	Acute Toxicity (Oral)	Category 4	Harmful if swallowed	HP 6	F
H314	Skin corrosion	Category 1A	Causes severe skin burns and eye damage	HP 8	X
H335	Specific target organ toxicity, single exposure, Respiratory tract irritation	Category 3	Might cause respiratory irritation	HP5	X
H361	Reproductive toxicity	Category 2	Suspected damaging of fertility or the unborn child	HP 10	

Environment

GHS code	e Hazard class/category		Hazard statements	2008/98/EC code	Labels
H 411	Hazardous to the aquatic environment, acute hazard	Category 2	Toxicity to aquatic life with long lasting effect	HP 14	

PhysicalUnder abnormal use in not ventilated rooms may form explosive air/gas mixture during charging or when extreme overcharging / Extremely flammable gas (hydrogen) / Explosive, fire, blast or projection hazard.

GHS code	Hazard class/category		Hazard statements	2008/98/EC code	Labels
H203	Explosives	Division 1.3	Explosive; fire, blast or projection hazard	N/A	

4 First Aid Measures

Contact with skin:Remove contaminated clothing immediately and drench affected skin with plenty of water, then wash with soap and water.

Contact with eyes:If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes.

Seek immediate medical attention.

Ingestion: Do not induce vomiting.

Seek immediate medical attention.

Inhalation: Remove patient to fresh air.

Seek medical attention if irritation persists.

5 Fire-Fighting Measures

Auto-ignition point (Hydrogen) 580° C at 760 mm Hg Wear positive-pressure breathing apparatus In case of fire use foam, carbon dioxide or dry agent (S43) Flash point Hydrogen 259°C Flammable Limits in air, Lower 4.1% % by 3/4 vol. (Hydrogen)

Fire/explosion

Hydrogen and oxygen gases are produced in the cells during normal battery operation (hydrogen is flammable and oxygen supports combustion).

6 Accidental Release Measures

Immediate Actions: Shut off all ignition sources Clean Up Actions: Neutralise with soda ash Place in appropriate container Ventilate area Do not empty into drains (S29)

7 Handling and Storage

Under normal conditions of battery use, internal components will not present a health hazard

Handling: Keep away from heat and sources of ignition

Wash hands thoroughly after use

Avoid sparks

Avoid contact with metal jewellery and watches etc.

Do Not Remove Vent Caps

Do not double stack industrial batteries, it may cause damage.

Storage: Keep in cool and dry & Protect from heat.

Store lead acid batteries with adequate ventilation.

Room ventilation is required for batteries utilised for standby power generation.

Never re-charge batteries in an unventilated, enclosed space.

8 Exposure Controls / Personal Protection

Personal protection: Wear safety shoes with toe protector.

Where internal components are liberated use rubber or neoprene boots.

Wear goggles/safety glasses giving complete eye protection.

Respiratory protection may be required under exceptional circumstances when

excessive air contamination exists. Wear PVC mitts, gloves or gauntlets.

Exposure Limits: Lead OES / LTEL - ppm 0.15 mg/m3

Lead Dioxide OES / LTEL - pmm 0.15 mg/m3

9 Physical and Chemical Properties

Odour: Not applicable

Appearance: Sealed Valve Regulated lead Acid Battery

State under normal temp: Solid Flash point (Hydrogen):259° C

Internal components

pH - (Sulphuric acid): 1.3.

Boiling point: Battery Electrolyte 110° C, Lead 1755° C

(at 760 mm/Hg)

Melting point: Lead 327.4° C

Vapour pressure: 11.7

Vapour density: Battery Electrolyte 3.4, (air =1)

Specific gravity: Battery Electrolyte 1.3 g/cm3. (water =1)

Auto-ignition point: 580° deg C at 760 mm/Hg.

Water solubility: Battery Electrolyte is 100% soluble in water

10 Stability and Reactivity

VRLA Batteries are considered stable at normal conditions.

Keep away from heat and sources of ignition.

Incompatible with reducing agents. Incompatible with organic agents.

Decomposition products may include hydrogen.

Decomposition products may include sulphur oxides.

11 Toxicological Information

Danger of cumulative effects. (R33)

May cause severe irritation.

May cause gastro-intestinal disturbances.

Can cause damage to the mucous membranes.

12 Ecological Information

Ecotoxicology - no information available

13 Disposal Considerations

Classification: This material and/or its container must be disposed of as hazardous waste. Disposal considerations: Do not discharge into drains or the environment, dispose to an authorised waste collection point.

14 Transport Information

PB PREMIUM BATTERY battery is not regulated for transportation because it has been tested and passed the tests specified in 49 CFR 173.159(d), IATA Packing Instruction A67, and IMDG Special Provision 238.

We hereby certify that ASIA SOURCES HONG KONG,LTD range of Maintenance Free Rechargeable Sealed Lead Acid batteries conform to the UN2800 classification as "Batteries, Non-Spillable, and electric storage" as a result of passing the Vibration and Pressure Differential Test described in DOT [49 CFR 173.159(d) and IATA/ICAO [Special Provision A67].

ASIA SOURCES HONG KONG,LTD having met the related conditions are EXEMPT from hazardous goods regulations for the purpose of transportation by DOT,IMDG and IATA/ICAO, and therefore are unrestricted for transportation by any means.

15 Regulatory information

Classification and labeling. Not classified as hazardous for supply

16 Other Information

Under normal conditions of battery use, internal components will not present a health hazard. The information contained in this Safety Data Sheet is provided for battery electrolyte (acid) and lead, for exposure that may occur during battery production or container breakage or under extreme heat conditions such as fire.

Tested as per IMDG Amendment. 35-10, special provision 238 "a" and "b", Comply.

This Safety Data Sheet and the information therein does not constitute the user's own assessment of work place risk as required by other Health & Safety legislation.

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ASIA SOURCES HONG KONG, LTD

TECHNICAL DIRECTOR:

Daihui Zhou

JAN 1ST, 2019