

Company Identification

GS BATTERY TAIWAN CO., LTD.

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<http://www.gs-battery.com.tw>**Product Name: (Chemicals name or Merchandise Name)**

General Purpose : PE 、PX 、TEV 、LEV 、TPH 、SPV 、GTB TYPE

1. Identification of Substance

Identification of single- or mixed substance product: Mixed-substance product

(※) PBB spices or PBDE spices is not involved.

Parts	Material	Approximate % by wt. or Vol.	CAS Number
Plate	Lead and lead compounds	60-75%	7439-92-1 (Pb)
	Barium compound	0.3% or below	7440-39-3 (Ba)
Electrolyte	About 40% dilute sulfuric acid	12-25%	7664-93-9
Container /Cover	ABS resin (synthetic resin)	5-15%	9003-56-9
Separator	Glass Fiber	1-3%	65997-17-3
Other metal parts	Brass Other	1% or below	63338-02-6
Other resin parts	PP (synthetic resin)	1-5%	9003-07-0

2. Classification of Hazardousness and Poisonousness

Classification name	Classification standard not applicable to batteries.
Hazardousness	Charging a battery generates hydrogen and oxygen gases. Exposure of fire to them may catch a fire, resulting in an explosion.
Poisonousness	Exposure of electrolyte to skin or an eye may result in a burn or a loss of eyesight.
Effect on Environment	Highly concentrated electrolyte may adversely affect living things such as animals and plants.

3. Emergency Measures

When electrolyte is inhaled:	Move to a place full of fresh air and have immediate medical treatment.
When electrolyte is swallowed:	Immediately rinse the mouth with a large quantity of fresh water, and drink another large quantity of fresh water. Then, have immediate medical treatment.
When electrolyte is attached to skin:	Immediately wash it down with a large quantity of water, and thoroughly wash the skin with soap. If there is a fear of burn, have immediate medical treatment.
When electrolyte contacts the eyes	Immediately flush the eye sufficiently with water, and have immediate medical treatment.

4. Action at the Time of Fire

Fire fighting method: Extinguish a fire using a fire extinguisher of dry powder agent, foam agent or non-combustible gas.

5. Action at The Time of Electrolyte Leak of Outflow

Neutralize the leaked electrolyte with soda bicarbonate or slaked lime, then wash it down.

(At that time, be sure to wear protective goggles, gloves, and boots.)

6. Handling and Storing Precautions

Handling:	• Do not disassemble or modify the battery, nor short it between the terminals.
	• Do not put a fire close to the battery, or throw it into a fire.
	• Handle batteries as heavy objects.
	• With vents provided in a cubicle, for example, charge the battery in a well-ventilated room.
Storing:	Choose a place that is not exposed to high temperatures, high humidity, wind and rain, direct sunlight, fire, poisonous gasses, droplets, dust generation or ingress, or submersion.

7. Exposure Inhibiting Device

Not applicable to batteries.

8. Physical/Chemical Properties

Not applicable to batteries.

Materials (as example)	Dilute sulfuric acid (for 1.3 of specific gravity)	Lead	ABS resin
Outer appearance	Transparent liquid	Silver white solid	Black or Gray Solid
Specific gravity	1.3	11.3	1.20
Boiling point	110°C	1,740°C	—
Melting point	-40°C	327°C	(130°C~150°C) This is no clear melting point. It softens in the large temperature range.
Freezing point	-56.4°C	—	—
Vapor pressure	3.17 kPa (for 30% concentration at 30°C)	0.1 kPa (at 25°C)	—

9. Hazardousness information

As per “Classification of Hazardousness and Poisonousness” above.

10. Poisonousness information

As per “Classification of Hazardousness and Poisonousness” above.

11. Environmental information

As per "Classification of Hazardousness and Poisonousness" above.

12. Disposing precautions

Used batteries shall be recycled for reuse in accordance with relative national law and regulations.

13. Transporting precautions

Try to avoid mingling batteries with other substances. Handle with care so that no electrolyte leak occurs by overturning or dropping a battery.

14. Applicable laws and regulations

Poison and Deleterious Substance Control Law:	Electrolyte falls under "Deleterious Substance Category".
Labor Safety & Hygiene Law:	Lead falls under "Class 3 Substance" in Specific Chemical Substance Category.
Hazardous Materials Storage and Ship Transportation Regulations:	Electrolyte falls under "Corrosive Substance Category".
Fire Services Act:	Terminal materials fall under "Substances Inhibiting Fire Fighting".

15. Law on transport : (Shipping)

Valve regulated Lead Acid Battery is correspond UN-2800 on TRANSPORT OF DANGEROUS GOODS. But the Battery is not correspond to dangerous goods because it satisfied Special Provision 238 in International Maritime Dangerous Good Code 2015 Edition. (Amdt. 37-14)

16. Law on transport : (Air)

Battery is correspond to an escape Clause A 67 of dangerous goods in IATA. The Battery is not correspond to dangerous goods.

17. Law on transport : (Land transportation In U.S.A and Canada)

"NONSPILLABLE" or "NONSPILLABLE BATTERY" must be described on battery or package in order to call the attention of nature of transport goods to the drivers. According to law 173·159 by Department of Transportation (DOT).

18. TSCA Ingredients in batteries are listed in the TSCA registry as follows

Components		CAS Number	TSCA status
Electrolyte	Sulfuric Acid (H ₂ SO ₄)	7664-93-9	listed
Inorganic lead compound	lead (Pb)	7439-92-1	listed
	Lead oxide (PbO ₂)	1309-60-0	listed
	Lead sulfate (PbSO ₄)	7446-14-2	listed
	Calcium (Ca)	7440-70-2	listed
	Tin (Sn)	7440-31-5	listed
	Barium (Ba)	7440-39-3	listed
Container & Cover	Antimony trioxide (Sb ₂ O ₃)	1309-64-4	listed

19. California prop 65

- Battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.
- Wash hands after handling.

20. RoHS Instruction

Lead and lead compound contained in the lead-acid battery is off the subject of the RoHS instruction.

This information is accurate to the best of GS Battery Taiwan knowledge or obtained from sources believed by GS Battery Taiwan to be accurate. Before using any product, read all warnings and directions on the level.

For additional information concerning GS Battery Taiwan Co., Ltd. products or questions concerning the content of this MSDS please contact GS Battery Taiwan representative.