

Safety Data Sheet**GS Yuasa International Ltd.**Quality Assurance Department Industrial Battery Production Division
Industrial Batteries & Power Sources Business UnitEmergency contact: TEL 81-75-312-0702 FAX 81-75-312-0379
1,Inobanba-cho,Nishinosho,Kisshoin,Minami-ku,Kyoto,601-8520,Japan

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Product Name (Chemicals name or merchandise name) : NP,PE,PX,PXL Type Valve Regulated Lead-Acid Battery (non-Flame Retardant)			
Identification of Substance			
Identification of single or mixed substance product: Mixed substance product			
Parts	Material	Approximate% by weight	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	1-3%	—
Other metal parts	Brass etc.	1% or below	—
Other resin parts	PP (synthetic resin) ,epoxy resin, rubber etc.	5% or below	9003-07-0 (PP)
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.		
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.		
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.		
Action at The Time of Electrolyte Leak or 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.)			

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, ingress, or submersion.		
Exposure Inhibiting Device			
Not applicable to batteries.			
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	Solid
Specific gravity	1.3	11.3	1.0-1.3
Boiling point	114°C	1,740°C	-
Melting point	-40°C or below	327°C	(130-150°C) This is no clear melting point. It softens in the large temperature range
Freezing point	-56°C	-	-
Vapor pressure	1.8 kPa (at 25°C)	0.1 kPa (at 25°C)	-
Hazardousness information			
As per "Classification of Hazardousness and Poisonousness" above.			
Poisonousness information			
As per "Classification of Hazardousness and Poisonousness" above.			
Environmental information			
As per "Classification of Hazardousness and Poisonousness" above.			
Disposing precautions			
Used batteries shall be recycled for reuse in accordance with relative national law and regulations.			
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.			
Applicable Laws and Regulations (Sulfuric acid)			

Poison and deleterious substance control law	Deleterious substance category		
Labor safety and hygiene law	Class 3 substance in specific chemical substance category		
Hazardous materials storage and ship transportation regulations	Corrosive substance category		
Fire services act	Substances inhibiting fire fighting		
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 PROVISIONS.			
Law on Transport (Air)			
Valve regulated lead-acid battery is correspond to an escape Clause A 67 of dangerous goods in IATA. "NONSPILLABLE" or "NONSPILLABLE BATTERY" must be described on battery or package according to IATA (USG-11).			
Law on Transport (Land Transportation in U.S.A. and Canada)			
"NONSPILLABLE" or "NONSPILLABLE BATTERY" must be described on battery or package according to law 173.159 by Department of Transportation (DOT).			
Applied Standard: JIS C 8702-2-1, 8702-2-2, 8702-3 IEC61056-1, 61056-2, 61056-3			
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 dioxide (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
California Proposition 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.			
RoHS Instruction			
Lead and lead compound contained in the lead-acid battery are off the subject of the RoHS instruction.			
This information is accurate to the best of GS Yuasa International's knowledge or obtained from sources believed by GS Yuasa International to be accurate. Before using any product, read all warnings and directions on the level.			
For additional information concerning GS Yuasa International products or questions concerning the content of this SDS please contact GS Yuasa International representative.			