

MATERIAL SAFETY DATA SHEET**SECTION 1 PRODUCT IDENTIFICATION****Production Name:** Dry Charged Battery without Sulfuric Acid

Chemical/ Trade Name

Lead-Acid Battery (Dry-Charged)

Chemical Family

Electric Storage Battery

Manufacturers Name/Address Telephone:

Koyosonic Electronics Co., Ltd.

Tongqiao Industrial Park, Tongqiao, Huizhou, Guangdong, China

SECTION 2 HAZARDOUS INGREDIENTS/IDENTITY

Components	CAS Number	Appx.wt. percent	OSHA PEL
Inorganic lead compounds			
Lead	7439-92-1	75	50 ug/m3
Antimony	7440-35-0	.2	500
Arsenic	7440-38-2	.003	10
Calcium	7440-70-2	.03	-----
Tin	7440-31-5	.06	2000
Case/Cover			
Polypropylene	9003-07-0	5	n/a
Hard Rubber	---	5	---

SECTION 3 PHYSICAL & CHEMICAL CHARACTERISTICS

Electrolyte: N/A

SECTION 4 FIRE AND EXPLOSION DATA

Flash Point: n/a Method Used: non-flammable

Flammable Limits: n/a

Extinguishing media: CO₂, Foam, Dry Chemical

Special Fire Fighting Procedures: Positive pressure self contained breathing apparatus should be used.

Unusual Fire and Explosion Hazards: Avoid contact of metallic materials simultaneously with the positive and negative terminals of the battery.

SECTION 5 REACTIVITY DATA

Stability Stable Conditions to Avoid Prolonged overcharge: sources of ignition

Incompatibility (materials to avoid)

Lead compounds Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, and reducing agents.

Hazardous Decomposition Products

lead compounds High temperature is likely to produce toxic metal fumes, vapor or dust; Hazardous polymerization will not occur

SECTION 6 HEALTH HAZARD DATA

Routes of Entry

Inhalation Lead compounds: Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

Ingestion Lead compounds: Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. This may lead to systematic toxicity and must be treated by a physician.

Skin contact Lead compounds: Not absorbed through the skin.

Eye contact Lead compounds: May cause irritation

Acute Overexposure Lead compounds: headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability.

Chronic Overexposure Lead compounds: Anemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage reproductive changes in both males and females.

Medical Conditions Aggravated by Exposure: Lead may aggravate some forms of kidney, liver and neurologic diseases.

Emergency and First Aid Procedures:

Inhalation Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

Ingestion: n/a

Skin: Lead compounds: Wash immediately with soap and water.

Eyes: Flush immediately with large amounts of water for at least 15 minutes and consult physician.

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SECTION 7 PRECAUTIONS FOR SAFE HANDLING AND USE

Spill or leak procedures: Stop flow of material, contain/absorb small spills with dry sand, earth, vermiculite. Do not use combustible materials.

Waste Disposal Methods: Spent batteries: Send to secondary lead smelter for recycling.

Place neutralized slurry into sealed containers and dispose of as a hazardous waste.

Handling and Storage: Store batteries in cool, dry, well ventilated areas with impervious surfaces and adequate containment. Batteries should be stored under roof for protection against adverse weather conditions. Separate from incompatible materials. Avoid damage to containers. Keep away from fire, sparks and heat.

Precautionary Labeling: n/a

SECTION 8 CONTROL MEASURES

Engineering Controls: Store and handle in well-ventilated area.

Work Practices: Handle batteries cautiously. Make certain vent caps are on securely. Avoid contact with internal components. Wear protective clothing when filling or handling batteries.

Respiratory Protection: None required under normal conditions. When concentration of lead dust exceeds the PEL use NIOSH approved respiratory protection.

Protective equipment: n/a

SECTION 9 TRANSPORTATION DATA

U.S. DOT Dry Batteries

Proper shipping name : Battery, dry charged

Hazard class/division: n/a

ID number: n/a

Packing group: III

Label required: n/a

Vessel stowage: A

SECTION 10 NFPA HAZARD RATINGS

Flammability (Red) 1

Health (Blue) 3

Reactivity (Yellow) 1

SECTION 11 REGULATORY INFORMATION

RCRA: Spent lead-acid batteries are not regulated as hazardous waste when recycled.

Spilled sulfuric acid is a characteristic hazardous waste; EPA hazardous waste number D002 (corrosive)

Tier 2 reporting is required for 10,000 pound of lead compounds or 500 pounds of 100% sulfuric acid.

Supplier Notification: If this product is sent to a manufacturer in SIC Codes 20-39, information containing the amount of lead and sulfuric acid must be sent along with the first shipment of each calendar year.

SECTION 12 TOXICOLOGICAL DATA

TSCA Ingredients listed below are in the TSCA registry as follows

	CAS NO.	TSCA Status
Inorganic Lead Compound		
Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO ₄)	7446-14-2	Listed
Antimony (Sb)	7440-35-0	Listed
Arsenic (As)	7440-38-2	Listed
Calcium (Ca)	7440-70-2	Listed