



PT TRIMITRA BATERAI PRAKASA

No. Doc : SD/CP/PPD/MSDS/15A

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Issue date : January 12, 1999

MATERIAL SAFETY DATA SHEET

Revisi : 02

Title : Dry Charge Battery

Date : June 28, 2010

I. PRODUCT & COMPANY IDENTIFICATION

- A. Product Name : Dry Charge Battery
B. Chemical Family/ Clasification : Electric storage Battery.
C. Manufacturer : PT TRIMITRA BATERAI PRAKASA
D. Address : Jl. Semper Timur No.3 - Cilincing
Jakarta Utara (14130)
INDONESIA
E. Telp No. : +62 21 440 3066
+62 21 440 3557
F. Website : www.trimitra-baterai.co.id

II. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECT:

- ROUTES OF ENTRY** : Hazardous exposure can occur only when product is heated, oxidized or otherwise or damaged to create lead dust, vapor or fume
- INHALATION** : Dust, vapor and fume may be absorbed by the respiratory system and can result in both acute and chronic overexposure as well as respiratory irritation.
- INGESTION** : Lead ingestion may cause abdominal pain, nausea, vomiting, diarrhea and severe cramping. This may lead rapidly to systemic toxicity and must be treated by the physician.
- SKIN** : Not readily absorbed through the skin.
- EYES** : Dust, vapor or fume may cause irritation.

ACUTE HEALTH HAZARD:

Symptom of lead toxicity include headache, fatigue, abdominal apin, loss of apatitte, muscular aches and weaknes, sleep diturbances and irritability.

CHRONIC HEALTH HAZARD:

Lead absorption may cause nausea, weight loss, abdominal spasms, fatigue, and pain in arms, legs and joints. Other effect may include central nerveus system damage, kidney dysfunction, anemia, neuropathy, particularly of the motor narves, with wrist drop, and potential reproductive effects.

MEDICAL CONDITIONS GENERALLY AGGREGATED BY EXPOSURE:

Lead and its compounds can aggravate some form of kidney, liver and neurological disease. Children and pregnant woment must be protected from lead exposure. Persons with kidney disease may be at increased risk of kidney failure.

ADDITIONAL INFORMATION:

No health effect are expected related to normal use of this product as sold.

III. COMPOTITION / INGREDIENT INFORMATION

Ingredients

<u>(Chemical & common name)</u>	<u>Hazard Category</u>	<u>CAS No.</u>	<u>% By wt</u>
Lead/ lead oxide/ lead sulfate	Acute-Chronic	7439-92-1	80-90
Antimony	Chronic	7440-36-0	< 2
Tin	Chronic	7440-31-5	< 0.01
Arsenic	Acute-Chronic	7440-38-2	< 0.01
Polypropilene	-	9003-07-0	7 ~ 10



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IV. FIRST AID MEASURES

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

INGESTION : Consult physician immediately

SKIN : Wash immediately with soap and water

EYES : Flush immediately with copious of water for at least 15 minutes; consult physician

V. FIRE FIGHTING MEASURES

Inorganic lead compound is not a combustible material, nor will it explode under conditions of normal use.

FLASH POINT : NA

LOWER EXPLOSIVE LIMIT (LEL) : NA

UPPER EXPLOSIVE LIMIT (UEL) : NA

EXTINGUISHING MEDIA : Dry chemical, carbon dioxide, foam

SPECIAL FIRE FIGHTING PROCEDURES & PROTECTIVE EQUIPMENT:

Use full body protective clothing and self-contained breathing apparatus with positive pressure and full paze

UNUSUAL FIRE AND EXPLOSION HAZARD:

Keep sparks or other sources of ignition away from batteries. Do not allow metallic materials to simultaneously contact negative and positive terminals of cells and batteries. Follow manufacturer's intruction for instalation and service.

VI. ACCIDENTAL RELEASE MEASURE

PERSONAL PRECOUTION:

Avoid contact of lead with skin. Wash hands thoroughly after handiing product.

ENVIRONMENTAL PRECAUTIONS:

Prevent spilled material from entering sewers and waterwys

SPILL OR LEAK PROCEDURES:

Lead dust should be vacuumed or wet swept, do not use compressed air.

VII. HANDLING AND STORAGE

Handling and Storage:

- Store batteries in cool, dry well-ventilated area on an impervius surface
- Batteries should also be stored under roof for protection against adverse weather conditions.
- If batteries case is broken., avoid contact with internal components.
- Place cardboard between layers of stacked batteries to avoid damage and short circuits.
- Do not allow conductive material to touch the battery terminals. A short circuit may occur and cause battery failure and fire.
- Keep away from fire, sparks and heat.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with strong bases, acids combustibile organic materials, halogenates, pottasium nitrate, permanganate, peroxide, nascent hydrogen, reducing agents and water.



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VIII. EXPOSURE CONTROL AND PERSONAL PROTECTION

ENGINEERING CONTROL:

Store and charge in well-ventilated area. General dilution ventilation is acceptable

WORK PRACTICES:

Handle batteries cautiously, do not tip to avoid spills (if with electrolyte). Avoid contact with internal component. Wear protective clothing when filling or handling batteries. Wash filling or handling batteries. Wash hands after handling.

RESPIRATORY PROTECTION:

None required under normal conditions. See special firefighting procedures (section 5)

SKIN PROTECTION:

Wear acid-resistant gloves as a standard procedure to prevent skin contact.

EYE PROTECTION:

Wear protective glasses with side shields or chemical goggles or face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

None required under normal use conditions when handling dry batteries.

IX PHYSICAL AND CHEMICAL PROPERTIES

- A Appearance** : Case and cover strong enough and rigid with air hole on the cover (vent plugs).
Terminal positive and negative silver-grey metal.
Some time with additional handle for special purpose
- B Odor** : Odorless
- C Boiling point** : Not applicable
- D Melting point** : 1. 164 - 168°C (for polypropylene)
2. 250 - 327°C (for lead alloy)

X STABILITY AND REACTIVITY

- A Stability** : Stable
- B Thermal decomposition temperature** : 1. >300°C (for polypropylene)
2. >500°C (for lead alloy), produce toxic metal fume, vapor or duce
- C Hazardous decomposition Product** : Contact with strong acid will generate . CO, CO2 and hydrogen.
- E Hazardous polymerization** : Will not occur
- F Condition to avoid** : Prolonged overcharge, sources of ignition



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XI. TOXICOLOGICAL INFORMATION

Acute toxicity : Lead : No data available

Carcinogenicity : Lead Compounds : Likely in animals at extreme doses, possible carcinogen in humans.

XII. ECOLOGICAL INFORMATION

DEGRADABILITY:

Lead is persistent in soils and sediments. No data available on biodegradation.

AQUATIC TOXICITY (for LEAD)

No data available

XIII. DISPOSAL CONSIDERATION

The product is no effect on the environmental unless in finely divided form. Lead is taken from the soil by plant and can be concentrated in the food chain.

It is also relatively mobile in the aquatic environment and be concentrated by aquatic organism.

XIV. TRANSPORT INFORMATION

Vessel-IMO-IMDG

The international transportation of dry charge batteries is not regulated by the International Maritime Dangerous Goods Code (IMDG) as a hazardous materials.

XV. REGULATORY INFORMATION

No data available

XVI. OTHER INFORMATION

No data available

APPROVED	CHECKED	PREPARED