

Victron Energy OPzS Batteries

MATERIAL SAFETY DATA SHEET

SECTION 1 - GENERAL INFORMATION

MANUFACTURER'S NAME: Victron Energy B.V. ADDRESS: De Paal 35 1351 JG Almere-Haven The Netherlands	EMERGENCY TELEPHONE NO.: +31-36-5359700 OTHER INFORMATION CALLS: +31-36-5359700
Chemical / Trade Name (as used on label): Electric Storage Battery	Chemical Family / Classification: Electric Storage Battery_OPzS_OGi
PERSON RESPONSIBLE FOR PREPARATION Reinout Vader, Managing Director	Revised Date: March 30, 2008

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Components Inorganic compounds of:	CAS Number	% Weight	OSHA	ACGIH	NIOSH
Lead	7439-92-1	90-95	50	150	100
Calcium	7440-70-2	0.02	--	--	--
Tin	7440-31-5	0.06	2000	2000	--
Antimony	7440-36-0	1-6	500	500	1000
Arsenic	7440-38-2	<1	500	500	--
Copper	7440-50-8	<1	1000	1000	--

NON-HAZARDOUS INGREDIENTS

Polyester tube
Polyethylene bottom bar

NOTE: Inorganic lead is the primary component of every battery plate manufactured by Victron Energy d.d. or its subsidiaries. Other ingredients may be present dependent upon battery type.

SECTION 3 - HAZARD IDENTIFICATION

Extinguishing Media:	CO ₂ ; foam; dry chemical
Special Fire Fighting Procedure:	N/A
Unusual Fire and Explosion Hazards:	N/A
Reactivity Data	
Stability:	Stable
Conditions to Avoid:	N/A
Incompatibility (Materials to avoid)	<i>Lead Compounds:</i> Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.
Hazardous Decomposition Products:	<i>Lead Compounds:</i> Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.
Stability:	Stable
Conditions to Avoid:	N/A
Incompatibility (Materials to avoid)	<i>Lead Compounds:</i> Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.
Hazardous Decomposition Products:	<i>Lead Compounds:</i> Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

SECTION 4 - FIRST AID MEASURES

Routes of Entry:	Lead compounds: Hazardous exposure can occur only when product is heated above the melting point, oxidized, or otherwise processed or damaged to create dust, vapor, or fume.
1. Inhalation	Lead Compounds: Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.
2. Ingestion	Lead Compounds: Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. This may lead rapidly to systemic toxicity.
3. Skin Contact	Lead Compounds: Not absorbed through the skin.
4. Eye Contact	Lead Compounds: May cause eye irritation.
5. Effects of Overexposure – Acute	Lead Compounds: Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances, and irritability.
6. Effects of Overexposure – Chronic:	Lead Compounds: Anemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage; reproductive changes in both males and females.
7. Carcinogenicity	Lead Compounds: Listed as a 2B carcinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present.
8. Medical Conditions Generally Aggravated by Exposure	Lead and its compounds can aggravate some forms of kidney, liver, and neurologic diseases.

SECTION 5 – EMERGENCY AND FIRST AID PROCEDURES

Inhalation	Lead Compounds: Remove from exposure, gargle, wash nose and lips; consult physician.
Ingestion	Lead Compounds: Consult physician immediately.
Skin	Lead Compounds: Wash immediately with soap and water.

SECTION 6 – PRECAUTIONS FOR SAFE HANDLING AND USE

Handling	No hazards under normal usage .
Handling and Storage	Store plate for batteries under roof in cool, dry.
Waste Disposal Methods	Spent plate of batteries: Send to secondary lead smelter for recycling.

SECTION 7 – CONTROL MEASURES

Engineering Controls	Store and handle in well-ventilated area.
Respiratory Protection	None required under normal conditions. Use NIOSH or MSHA-approved respiratory protection.
Protective Gloves	None required under normal conditions.
Eye Protection	None required under normal conditions.

SECTION 8 - TRANSPORT INFORMATION

TRANSPORTATION: Wet (filled with electrolyte) batteries are regulated by U.S. DOT as a hazardous material, as provided in 49 CFR 173.159

Proper Shipping Name: Battery, wet, filled with acid
Hazard class /division 8
ID Number: UN2794
Packing Group: III
Label Required: Corrosive

Toxic Chemical **CAS Number** **Approximate % by Weight**

Lead 7439-92-1 50

SECTION 9 – REGULATORY INFORMATION

Ingredients in Victron's batteries plate are listed in the TSCA Registry as follows:

Inorganic Lead Compound	CAS NO.	TSCA Status
Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO4)	7446-14-2	Listed
Calcium (Ca)	7440-70-2	Listed
Tin (Sn)	7440-31-5	Listed
Antimony	7440-36-0	Listed
Arsenic	7440-38-2	Listed
Copper	7440-50-8	Listed

SECTION 9 – OTHER INFORMATION

“WARNING: This product contains lead, a chemical known to cause cancer, or birth defects or other reproductive harm.”

PREPARED BY: ENVIRONMENTAL RESOURCES DEPARTMENT

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