

## 1. Identification

<b>Product identifier</b>	<b>Dry Battery (without electrolyte)</b>
<b>Other means of identification</b>	-
<b>Recommended use</b>	Lead Acid Battery (without electrolyte)
<b>Recommended restrictions</b>	Electric storage battery.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	None known.
<b>Manufacturer/Supplier</b>	Energy Battery Group, Inc.
<b>Address</b>	1800 Roswell Road, Suite 2200, Marietta, GA 30062
<b>Telephone number</b>	(888) 823-0954
<b>Contact person</b>	
<b>Emergency telephone number</b>	USA/Canada: CHEMTREC (800) 424-9300, Outside USA 1 (703) 527-3887
<b>E-mail</b>	info@energybattery.com

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Reproductive toxicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 2 (Blood, Central nervous system, Kidney)
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		

<b>Signal word</b>	Danger
<b>Hazard statement</b>	Harmful if swallowed. Harmful if inhaled. May damage fertility or the unborn child. May cause damage to organs (Blood, Central nervous system, Kidney) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
<b>Response</b>	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Collect spillage.
<b>Storage</b>	Not assigned.
<b>Disposal</b>	Refer to manufacturer/supplier for information on recovery/recycling. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

Supplemental information None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%
Lead and lead compounds (inorganic)	7439-92-1	90 - 94
Lead monoxide	1317-36-8	> 0.1

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

**Inhalation** Exposure to contents of an open or damaged battery: Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.

**Skin contact** Exposure to contents of an open or damaged battery: Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Exposure to contents of an open or damaged battery: Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

**Ingestion** Exposure to contents of an open or damaged battery: Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell.

**Most important symptoms/effects, acute and delayed** Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

**Indication of immediate medical attention and special treatment needed** Treat symptomatically.

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

**Suitable extinguishing media** Dry chemical, foam, carbon dioxide, water fog.

**Unsuitable extinguishing media** In the event that a battery is ruptured and the internal components are exposed, DO NOT USE WATER. Do not use carbon dioxide directly on cells.

**Specific hazards arising from the chemical** Batteries evolve flammable hydrogen gas during charging and may increase fire risk. Containers may explode when heated.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

**Fire fighting equipment/instructions** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of corrosive and flammable materials.

#### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** In the event of damage resulting in a leak or exposed materials, avoid contact with contents of an open or damaged cell or battery.

**Methods and materials for containment and cleaning up** Use approved industrial vacuum cleaner for removal. Dispose of waste and residues in accordance with local authority requirements.

**Environmental precautions** Do not allow to enter drains, sewers or watercourses.

#### 7. Handling and storage

**Precautions for safe handling** In the event of damage resulting in a leak of exposed materials, avoid contact with contents of an open or damaged cell or battery. Keep away from heat, sparks and open flame. Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire. Wash hands thoroughly after handling.

**Conditions for safe storage, including any incompatibilities** Store in original tightly closed container. Protect containers from damage. Place cardboard between layers of stacked batteries to avoid damage and short circuits.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Components	Type	Value
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m <sup>3</sup>
Lead monoxide (CAS 1317-36-8)	TWA	0.05 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m <sup>3</sup>
Lead monoxide (CAS 1317-36-8)	TWA	0.05 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m <sup>3</sup>
Lead monoxide (CAS 1317-36-8)	TWA	0.05 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Lead and lead compounds (inorganic) (CAS 7439-92-1)	200 µg/l	Lead	Blood	*

\* - For sampling details, please see the source document.

**Appropriate engineering controls** Provide adequate ventilation. Provide easy access to water supply and eye wash facilities.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** None under normal conditions. Leak from a damaged or opened battery: Wear safety glasses with side shields (or goggles).

#### Skin protection

**Hand protection** None under normal conditions. Leak from a damaged or opened battery: Wear appropriate chemical resistant gloves.

#### Skin protection

**Other** None under normal conditions. Leak from a damaged or opened battery: Wear suitable protective clothing.

**Respiratory protection** None under normal conditions.

**Thermal hazards** When material is heated, wear gloves to protect against thermal burns.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

**Physical state** Solid.

**Form** Lead, solid.

**Color** Not available.

**Odor** None specific.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** 486 - 680 °F (252.22 - 360 °C)

<b>Initial boiling point and boiling range</b>	> 2516 °F (> 1380 °C) (760 mmHg)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable at normal conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	Overcharging. Ignition sources.
<b>Incompatible materials</b>	Water. Strong reducing agents. Strong bases. Strong oxidizers.
<b>Hazardous decomposition products</b>	Carbon monoxide. Carbon dioxide (CO <sub>2</sub> ). Varying hydrocarbon compounds.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Exposure to contents of an open or damaged battery: Harmful if inhaled.
<b>Skin contact</b>	Exposure to contents of an open or damaged battery: Dust may irritate skin.
<b>Eye contact</b>	Exposure to contents of an open or damaged battery: Dust may irritate the eyes.
<b>Ingestion</b>	Exposure to contents of an open or damaged battery: Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Exposure to contents of an open or damaged battery: Dust may irritate the eyes and the respiratory system.

### Information on toxicological effects

<b>Acute toxicity</b>	Not relevant, due to the form of the product.
<b>Skin corrosion/irritation</b>	Exposure to contents of an open or damaged battery: May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Exposure to contents of an open or damaged battery: May cause eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	No data available.
<b>Skin sensitization</b>	No data available.
<b>Germ cell mutagenicity</b>	No data available.
<b>Carcinogenicity</b>	

### IARC Monographs. Overall Evaluation of Carcinogenicity

Lead and lead compounds (inorganic) (CAS 7439-92-1) 2B Possibly carcinogenic to humans.  
Lead monoxide (CAS 1317-36-8) 2A Probably carcinogenic to humans.

### NTP Report on Carcinogens

Lead and lead compounds (inorganic) (CAS 7439-92-1) Reasonably Anticipated to be a Human Carcinogen.  
Lead monoxide (CAS 1317-36-8) Reasonably Anticipated to be a Human Carcinogen.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

**Reproductive toxicity** None under normal conditions. Exposure to contents of an open or damaged battery: May damage fertility or the unborn child.

**Specific target organ toxicity - single exposure** No data available.

**Specific target organ toxicity - repeated exposure** None under normal conditions. Exposure to contents of an open or damaged battery: May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Due to the physical form of the product it is not an aspiration hazard.

**Chronic effects** Exposure to contents of an open or damaged battery: Heavy lead exposure may result in central nervous system damage, encephalopathy and damage to the blood-forming (hematopoietic) tissues.

## 12. Ecological information

**Ecotoxicity** None under normal conditions. Exposure to contents of an open or damaged battery: Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Lead and lead compounds (inorganic) (CAS 7439-92-1)		
LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	1.17 mg/l, 96 Hours
Lead monoxide (CAS 1317-36-8)		
<b>Aquatic</b>		
Crustacea	Water flea (Daphnia magna)	0.132 mg/l, 48 Hours

**Persistence and degradability** The degradation half-life of the product is not known. Lead and its compounds are highly persistent in water.

**Bioaccumulative potential** Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants, but very little bioaccumulation occurs through the food chain.

**Mobility in soil** If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater.

**Mobility in general** The product is insoluble in water and will spread on water surfaces.

**Other adverse effects** None known.

## 13. Disposal considerations

**Disposal instructions** Recycle the batteries, as the primary disposal method. Return lead-acid batteries to distributor, manufacturer or lead smelter for recycling. Avoid discharge into water courses or onto the ground. Dispose of in accordance with local regulations.

**Local disposal regulations** Empty containers should be taken to an approved waste handling site for recycling or disposal.

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

**Waste from residues / unused products** Avoid discharge into water courses or onto the ground.

**Contaminated packaging** Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

**DOT**  
Not regulated as dangerous goods.

**IATA**  
Not regulated as dangerous goods.

**IMDG**  
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Lead and lead compounds (inorganic) (CAS 7439-92-1) Listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Lead and lead compounds (inorganic) (CAS 7439-92-1) Reproductive toxicity  
Central nervous system  
Kidney  
Blood  
Acute toxicity

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Acute toxicity (any route of exposure)  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Lead and lead compounds (inorganic)	7439-92-1	90 - 94

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Lead and lead compounds (inorganic) (CAS 7439-92-1)  
Lead monoxide (CAS 1317-36-8)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

### US state regulations

#### US. Massachusetts RTK - Substance List

Lead and lead compounds (inorganic) (CAS 7439-92-1)  
Lead monoxide (CAS 1317-36-8)

#### US. New Jersey Worker and Community Right-to-Know Act

Lead and lead compounds (inorganic) (CAS 7439-92-1)  
Lead monoxide (CAS 1317-36-8)

#### US. Pennsylvania Worker and Community Right-to-Know Law

Lead and lead compounds (inorganic) (CAS 7439-92-1)  
Lead monoxide (CAS 1317-36-8)

#### US. Rhode Island RTK

Lead and lead compounds (inorganic) (CAS 7439-92-1)

## California Proposition 65



**WARNING:** Cancer and Reproductive Harm. [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)  
or

PROPOSITION 65 WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer.  
WASH HANDS AFTER HANDLING.

### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Lead and lead compounds (inorganic) (CAS 7439-92-1) Listed: October 1, 1992

Lead monoxide (CAS 1317-36-8) Listed: October 1, 1992

### California Proposition 65 - CRT: Listed date/Developmental toxin

Lead and lead compounds (inorganic) (CAS 7439-92-1) Listed: February 27, 1987

### California Proposition 65 - CRT: Listed date/Female reproductive toxin

Lead and lead compounds (inorganic) (CAS 7439-92-1) Listed: February 27, 1987

### California Proposition 65 - CRT: Listed date/Male reproductive toxin

Lead and lead compounds (inorganic) (CAS 7439-92-1) Listed: February 27, 1987

### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Lead and lead compounds (inorganic) (CAS 7439-92-1)

Lead monoxide (CAS 1317-36-8)

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 19-September-2017

**Revision date** 08-January-2018

**Version #** 02

**List of abbreviations** TWA: Time Weighted Average.  
LC50: Lethal Concentration 50%.  
SVHC: Substance of Very High Concern.

**References** IARC Monographs. Overall Evaluation of Carcinogenicity  
Registry of Toxic Effects of Chemical Substances (RTECS)

**Disclaimer** The information in this SDS was obtained from sources which we believe are reliable, but no warranty or representation as to its accuracy or completeness is hereby given. Users should consider the information herein only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal, the safety and health of employees and customers and the protection of the environment.