



Safety Data Sheet

Lead-Acid Battery, Dry Unformed (DUF)

Section 1 – Identification

Product Identifier: Lead-Acid Battery, Dry Unformed (DUF) Product Use: Rechargeable Electrical Storage	Manufacturer: <i>U.S. Battery Manufacturing Company</i> Primary Addresses: 1675 Sampson Ave. Corona, CA 92879 1895 Tobacco Rd. Augusta, GA 30906
General Info: 951-371-8090 (M-F, 9AM-5PM EST) Contact: Health & Safety Department	Emergency: US & Canada: 800-535-5053 (INFOTRAC) International: +1-352-323-3500

Section 2 – Hazards Identification

2.1 - Classification

Physical	Health	Environmental
Not applicable	Acute Toxicity: Category 4 ¹	Aquatic Hazard: Acute 1
	Carcinogenicity: Category 1	Aquatic Hazard: Chronic 1
	Infertility: Category 1	
	STOT ² : Category 1	

Notes: 1. Hazard Category 4 in **oral, dermal, & inhalation**.
2. Specific Target Organ Toxicity following single exposure.

2.2 – Label Elements



Signal Word: DANGER

Hazard Statements

H302/332	Harmful if swallowed or inhaled
H350	May cause cancer if ingested or inhaled
H360	May damage fertility or unborn children if ingested or inhaled
H370	Damages organs (blood, central nervous system, kidneys) through prolonged/repeated exposure
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statements

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash (hands & clothing) thoroughly after handling.
P270	Do not eat, drink or smoke when using (handling) this product.
P273	Avoid release to the environment.
P301/311	IF SWALLOWED: Call a POISON CENTER (in US: 800-222-1222) or a doctor.
P363	Wash contaminated clothing before reuse.
P502	Refer to supplier for information on recovery or recycling.

Section 3 – Composition / Information on Ingredients

Ingredients	CASRN ¹	% by Weight
Elemental Lead (Pb) and Lead(IV) oxide (PbO ₂), also known as <i>lead dioxide</i>	7439-92-1 1309-60-0	95
Antimony	7440-36-0	1-5

Notes: 1. Chemical Abstracts Service Registry Number (i.e., CAS#)

Section 4 – First-Aid Measures

Following inhalation	Remove from exposure, gargle, wash nose & lips. Consult physician.
Following skin contact	Avoid inhalation/ingestion. Wash affected area with soap & water.
Following eye contact	Rinse immediately with plenty of water.
Following ingestion	Consult physician.

Section 5 – Firefighting Measures

Suitable extinguishing media	Use appropriate media for surrounding fire (i.e., dry chemical, CO ₂ , or water spray). Do not use water on live electrical circuits.
Specific hazards	Not applicable.
Special protective equipment & precautions	Not applicable.

Section 6 – Accidental Release Measures

Personal precautions & protective equipment	No health effects are expected related to normal use. If article is recycled, vacuum lead dust (using HEPA filter). Do not use compressed air or dry sweep.
Emergency procedure, containment, & cleanup	Collect spilled material and place in approved container for disposal or recycle. Dispose of any non-recyclable materials in accordance with regulations.
Environmental precautions	Dispose of as a hazardous waste in accordance with applicable regulations.

Section 7 – Handling & Storage

Precautions for safe handling	Except during recycling operations, do not breach casing. Use banding or stretch wrap to secure items for shipping.
Conditions for safe storage	Not applicable.

Section 8 – Exposure Control / Personal Protection

	Ingredient	CASRN	Limit	Value
Control parameters	Lead (Pb)	7439-92-1	TWA	0.05 mg/m ³
	Lead(IV) oxide (PbO ₂)	1309-60-0	TWA	0.05 mg/m ³
Engineering controls	Not applicable.			
Individual protection measures	Wear protective clothing, including eye protection, when filling batteries.			

Section 9 – Physical & Chemical Properties

(a) Appearance	Plastic encasement
(b) Odor	None
(c) Odor threshold	Not applicable
(d) pH	Not applicable
(e) Melting point (lead plates)	Lead: ~ 620°F
(f) Initial boiling point & boiling range	Not applicable
(g) Flash point	Not applicable
(h) Evaporation rate	Not applicable
(i) Flammability (solid, gas)	Not applicable
(j) Upper/lower flammability/explosive limits	Not applicable
(k) Vapor pressure (mm Hg @ 20°C)	Not applicable
(l) Vapor density	Not applicable
(m) Relative density (i.e., specific gravity)	Not applicable
(n) Solubility	Lead (0%)
(o) Partition coefficient:	Not applicable
(p) Auto-ignition temperature	Not applicable
(q) Decomposition temperature	Not applicable
(r) Viscosity	Not applicable

Section 10 – Stability & Reactivity

Reactivity/Stability	Stable under normal conditions at ambient temperature.
Conditions to avoid	None listed.
Incompatible materials	None listed.
Hazardous decomposition products	Lead compounds: Temperatures above the melting point may produce toxic fumes.

Section 11 – Toxicological Information

Under normal conditions/use, exposure to toxic material is not expected. The following information is provided for acid or lead exposure that may occur due to container breakage or under extreme conditions such as fire.

<u>Exposure Routes</u>	<u>Information</u>
1. Inhalation 2. Ingestion 3. Skin 4. Eye	1. Lead Compounds: inhalation of dust/fumes may irritate respiratory tract & lungs. 2. Lead Compounds: acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea & severe cramping. A physician must treat this. 3. Lead Compounds: not absorbed through skin. 4. Lead Compounds: may cause eye irritation.
Symptoms of overexposure: Acute/Chronic effects	<u>Acute effects</u> Lead Compounds: Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability <u>Chronic effects</u> Lead Compounds: anemia; damage to blood-forming tissues; neuropathy (particularly of motor nerves); kidney damage; reproductive changes (males & females). Heavy exposure may result in central nervous system damage.
Carcinogenicity	Lead Compounds: IARC lists lead as Group 2A - likely in animals at extreme doses. Per OSHA 29 CFR 1910.1200 App F, this is approximately equivalent to GHS Category 1B.
Toxicity	Lead: Acute Toxicity Estimate (ATE) = 500 mg/kg Antimony: LD ₅₀ = 100 mg/kg (Rat)

Section 12 – Ecological Information

Ecotoxicity	Lead: 48-hr LC ₅₀ (aquatic invertebrates): < 1 mg/L
Persistence & Degradability	Lead is very persistent in soil & sediments. No data on environmental degradation.
Bioaccumulative Potential	Bioaccumulation of lead occurs in aquatic & terrestrial animals & plants but little bioaccumulation occurs through the food chain. Most studies include lead compounds rather than elemental lead.
Mobility in Soil	Mobility of elemental lead between ecological compartments is slow.
Other adverse effects	No known effects on atmospheric ozone.

Section 13- Disposal Considerations

Reclamation / Recycle	Spent lead-acid batteries are completely recyclable (99% of all lead-acid batteries are recycled) and should be reclaimed rather than disposed of as waste. Most retailers that sell lead-acid batteries collect used batteries for recycling, as required by state laws. Reclaimed lead-acid batteries are exempt from hazardous waste management requirements in accordance with 40 CFR 266 Subpart G – <i>Spent Lead-Acid Batteries Being Reclaimed</i> . Otherwise, spent lead-acid batteries fall under Universal Waste Regulations of 40 CFR 273 – <i>Standards for Universal Waste Management</i> .
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Section 14 – *Transport Information*

UN number	Not applicable.
Proper shipping name	Battery, Dry. Not regulated as hazardous material.
Transport hazard class	Not applicable.
Packing group	Not applicable.
Environmental hazards	Not regulated as hazardous material.
Special precautions	Not applicable.

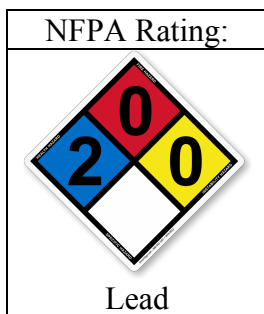
Section 15 - *Regulatory Information*

US Federal	RCRA: Spent batteries are subject to reduced requirements when managed in compliance with 40 CFR 266.80 or 40 CFR 273. If applicable; EPA hazardous waste numbers are D002 (corrosivity) and D008 (lead). EPA SARA Title III: Reporting of lead & sulfuric acid (and their releases) in lead-acid batteries used in cars, trucks, most cranes, forklifts, locomotive engines, and aircraft for the purposes of EPCRA Section 313 is not required. Lead acid batteries used for these purposes are exempt for Section 313 reporting per the "Motor Vehicle Exemption." See EPA's <i>Guidance Document for Lead & Lead Compound Reporting under EPCRA Section 313</i> for additional information.
California	Proposition 65 Warning: Battery posts, terminals, & related accessories contain lead & lead compounds, chemicals known to California to cause cancer & reproductive harm. Batteries may contain <i>other</i> chemicals known to California to cause cancer. Wash hands after handling.

Section 16 - *Other Information*

SDS originally prepared: 10 September 2013.

SDS last revised (entire document): 20 October 2015.



Disclaimer

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