

MATERIAL SAFETY DATA SHEET

BULLDOG BATTERY CORPORATION

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I PRODUCT IDENTIFICATION AND USE

MANUFACTURERS NAME:
Bulldog Battery Corporation
387 South Wabash Street
Wabash, Indiana 46992 USA
(800)443-3492 (For questions and emergencies)

DATE PREPARED: 02/19/1997
PRODUCT IDENTIFICATION:
Product Name: Battery, Electric Storage
Synonyms: Industrial Lead Acid Battery
Chemical Name: N/A
Chemical Family: N/A
CAS Number: Blend

II HAZARDOUS INGREDIENTS

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>
SULFURIC ACID 1.285 SP.GR.	20.0 - 30.0 %	7664-93-9
LEAD	60.0 - 65.0 %	7439-92-1
ANTIMONY	< 3.0 %	7440-36-0
ARSENIC	< 0.5 %	7440-38-2

EXPOSURE GUIDELINES:

SULFURIC ACID 1.285 Sp.Gr.
OSHA PEL: 1 mg/m³
ACGIH TLV: 1 mg/m³
MSHA LIMIT N/A

ANTIMONY
SHA PEL: .5 mg/m³
CIGH TWA: .5 mg/m³
MSHA LIMIT N/A

LEAD
OSHA PEL: .05 mg/m³
ACGIH TWA: .15 mg/m³
MSHA LIMIT .15 mg/m³

ARSENIC
OSHA PEL .01 mg/m³
ACGIH TWA .2 mg/m³
MSHA LIMIT .5 mg/m³

III PHYSICAL DATA

FORM MANUFACTURED ARTICLE COLOR ...: N/A ODOR: N/A

IV FIRE AND EXPLOSION DATA

FLAMMABLE PROPERTIES
COC Flash Point: N/A
EXTINGUISHING MEDIA:
Class ABC extinguisher, CO2

FLAMMABLE LIMITS IN AIR
Hydrogen Gas
LEL: 4%
UEL: 74%

UNUSUAL FIRE & EXPLOSION HAZARDS: Highly flammable hydrogen gas is generated during charging and operating of batteries. Keep heat and sparks away.

MISCELLANEOUS: If batteries are on charge, shut off power, use positive pressure SCBA. Water applied to electrolyte generates heat and may spatter.

V REACTIVITY DATA

STABLE: YES
Conditions To Avoid (Stability): Prolonged overcharge, sources of ignition.

POLYMERIZATION:
Product will not undergo polymerization.

INCOMPATIBILITY WITH OTHER MATERIALS: Combustibles and organic materials may cause fire and explosion. Also reacts with strong reducing agents.

DECOMPOSITION: Sulfuric Acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen.

VI HEALTH HAZARD DATA

Route(s) of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

HEALTH HAZARDS ACUTE AND CHRONIC:

Inhalation: Vapors or mist may cause severe respiratory irritation. Inhalation of dust or lead dust or fumes may cause irritation of upper respiratory tract and lungs. Ingestion: May cause severe irritation of mouth, throat, esophagus and stomach and may cause abdominal pain, nausea, vomiting, diarrhea and cramps.

CARCINOGENICITY INFORMATION:

No known cancer hazards.

SIGNS AND SYMPTOMS OF EXPOSURE:

Acid can cause irritation of eyes, nose and throat. Breathing of mist produces respiratory difficulty. Contact with eyes and skin causes irritation and skin burns.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Lung damage and aggravated pulmonary conditions, skin disease, and some forms of kidney, liver and neurologic disease may be aggravated by exposure.

EMERGENCY AND FIRST AID PROCEDURES:

Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention. If swallowed, give large quantities water, DO NOT INDUCE VOMITING, obtain medical treatment. Eyewash and shower stations should be made available.

VII PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Dilute spill cautiously with 5 or 6 volumes of water and neutralize gradually with sodium bicarbonate, soda ash or lime. When exposure level is not known, wear NIOSH approved positive pressure self contained respirator.

WASTE DISPOSAL METHOD:

Place in acid-resistant containers. Disposal must be made in accordance with applicable government regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store away from reactive materials as defined in Section VI, Reactivity Data

OTHER PRECAUTIONS:

Sodium bicarbonate, soda ash, sand or lime should be kept in same general area for emergency use. See Section IV and generation of hydrogen gas. If battery case is broken, avoid direct contact with internal components.

VIII CONTROL MEASURES

RESPIRATORY PROTECTION:

NIOSH/MSHA approved acid gas respirator when TLV is exceeded or employee is experiencing respiratory irritation. See Section V Health Hazard Data.

VENTILATION: Local exhaust preferred where possible.

Special: N/A Mechanical ventilation acceptable with 1 to 4 changes per hour. Other: N/A

PROTECTIVE GLOVES:

Acid resistant (i.e. rubber)

EYE PROTECTION:

Chemical safety goggles or face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Acid resistant aprons, boots and protective clothing.

ADDITIONAL INFORMATION:

The data in this Material Safety Data Sheet relates only to the specific material designated herein. This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Bulldog Battery Corporation. The data on this sheet are related only to the specific material designated herein. Bulldog Battery Corporation assumes no legal responsibility for use or reliance upon these data.