

MATERIAL SAFETY DATA SHEET

BULLDOG BATTERY CORPORATION

HEALTH 2
FLAMMABILITY 1
REACTIVITY 2
PERSONAL PROTECTION -

I PRODUCT IDENTIFICATION AND USE

MANUFACTURERS NAME:

Bulldog Battery Corporation

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Wabash, Indiana 46992 USA

(800)443-3492 (For questions and emergencies)

DATE PREPARED: 01/20/2012

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

Chemical Name	Amount	CAS Number
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

OSHA PEL: .5 mg/m³

ACIGH 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

APPEARANCE: Industrial/commercial lead acid battery

ODOUR THRESHOLD: NA

pH: <1

MELTING POINT: NA

VAPOUR PRESSURE: 10 mmHg

SPECIFIC GRAVITY (H₂O = 1): 1.27-1.33

SOLUBILITY IN WATER: 100% (as sulfuric acid)

AUTO-IGNITION TEMPERATURE: NA

UPPER EXPLOSIVE LIMIT (UEL): 74% (as hydrogen gas)

ODOUR: Odourless

PHYSICAL STATE: Sulfuric Acid: Liquid; Lead: solid

BOILING POINT: 235-240°F (113-116°C) (as sulfuric acid)

FREEZING POINT: NA

VAPOUR DENSITY (AIR = 1): > 1

EVAPORATION RATE (n-BuAc=1): < 1

FLASH POINT: Below room temperature (as hydrogen gas)

LOWER EXPLOSIVE LIMIT (LEL): 4% (as hydrogen gas)

FORM : MANUFACTURED ARTICLE

IV FIRE AND EXPLOSION DATA

FLAMMABLE PROPERTIES

COC Flash Point: N/A

FLAMMABLE LIMITS IN AIR

Hydrogen Gas

LEL: 4%

UEL: 74%

EXTINGUISHING MEDIA:

Class ABC extinguisher, CO2

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 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.

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