SAFETY DATA SHEET

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Canada / English

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1. IDENTIFICATION

Product identifier

Product Name Valve Regulated Lead-Acid Rechargeable battery

Other means of identification

Product Code(s) 1829246

Recommended use of the chemical and restrictions on use

Recommended Use Lead Acid (Non-Spillable) Battery

Restrictions on use No information available

Details of the supplier of the safety data sheet

Initial supplier identifier B&B Battery, USA Inc.

Address
6415 Randolph Street
Commerce
CA
90040
US

Telephone
Phone:323-278-1900
Fax:323-278-1268

E-mail byron@bb-battery.com

Emergency telephone number

Company Emergency Phone Number 1-800-424-9600

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Effects on or via lactation	Yes
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Danger

Hazard statements
Harmful if swallowed
Toxic if inhaled
Causes severe skin burns and eye damage
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
May damage fertility or the unborn child
May cause harm to breast-fed children
Causes damage to organs through prolonged or repeated exposure



Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Avoid contact during pregnancy and while nursing
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)
Immediately call a POISON CENTER or doctor

Eyes
Immediately call a POISON CENTER or doctor
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
Wash contaminated clothing before reuse
IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor
Call a POISON CENTER or doctor if you feel unwell
Immediately call a POISON CENTER or doctor

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information
Very toxic to aquatic life with long lasting effects Very toxic to aquatic life

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity
8 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
28 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
28 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
8 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Supplier Trade Secret	-	70 - 80%	-	-
Supplier Trade Secret	-	20 - 30%	-	-
Glass, oxide	65997-17-3	2	-	-
Supplier Trade Secret	-	0 - 10%	-	-
Supplier Trade Secret	-	0 - 10%	-	-
Supplier Trade Secret	-	0 - 10%	-	-

Trade secret	*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice	This is a battery. In case of rupture:. Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Immediate medical attention is required. Do not breathe dust.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not breathe vapor or mist. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Fire extinguishing Agent: ABC.
Large Fire	Large quantities of sprinkled and/or atomized water. (In this case to prevent environmental damage, flush water has to treat appropriately.)

Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.
Hazardous Combustion Products	Carbon oxides, lead and lead compound.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

Special protective equipment for fire-fighters	Use positive pressure, self-contained breathing apparatus. Beware of acid splatter during water application and wear acid-resistant clothing, gloves, face and eye protection. If batteries are on charge, shut off power to the charging equipment, but, note that strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not breathe vapor or mist. Avoid generation of dust. Do not breathe dust.
Other Information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Do not breathe vapor or mist.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store away from other materials. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Supplier Trade Secret	TWA: 0.05 mg/m^3	TWA: 0.05 mg/m^3	TWA: 0.05 mg/m^3	TWA: 0.05 mg/m^3
Supplier Trade Secret	TWA: 1 mg/m^3 STEL: 3 mg/m^3	TWA: 0.2 mg/m^3	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3 STEL: 3 mg/m^3
Glass, oxide 65997-17-3	TWA: 5 mg/m^3 TWA: 1 fibre/cm3	TWA: 1 fibre/cm3 TWA: 5 mg/m^3	TWA: 1 fibre/cm3 TWA: 5 mg/m^3	TWA: 1 fibre/cm3 TWA: 5 mg/m^3
Supplier Trade Secret	TWA: 20 ppm TWA: 85 mg/m^3 STEL: 40 ppm STEL: 170 mg/m^3	TWA: 20 ppm STEL: 40 ppm	TWA: 35 ppm STEL: 100 ppm	TWA: 50 ppm TWA: 213 mg/m^3 STEL: 100 ppm STEL: 426 mg/m^3 Skin
Supplier Trade Secret	TWA: 2 ppm TWA: 4.3 mg/m^3 Skin	TWA: 2 ppm Skin	TWA: 2 ppm CEV: 10 ppm Skin	TWA: 2 ppm TWA: 4.3 mg/m^3 Ceiling: 5 mg/m^3 Skin
Supplier Trade Secret	TWA: 2 ppm TWA: 4.4 mg/m^3	TWA: 2 ppm	TWA: 2 ppm	TWA: 2 ppm TWA: 4.4 mg/m^3

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992). See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not breathe vapor or mist. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid containing liquid; Solid
Appearance	Black grey
Odor	Sulphurous
Color	No information available
Odor Threshold	Not applicable

Property	**Values**	**Remarks Method**
pH	<2	
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	No data available	
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other Information

Explosive properties	No information available.
Oxidizing properties	No information available.
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials Acids. Bases. Oxidizing agent.

Hazardous Decomposition Products Carbon oxides, lead and lead compound.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Toxic by inhalation.
Eye contact	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes. Hives. Difficulty in breathing.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	652.10 mg/kg
ATEmix (inhalation-gas)	4,500.00 ppm
ATEmix (inhalation-dust/mist)	0.987 mg/L
ATEmix (inhalation-vapor)	11.00 mg/L

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

8 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

28 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

28 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

8 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Product Information

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Supplier Trade Secret	= 2140 mg/kg (Rat)	-	= 0.375 mg/L (Rat) 4 h

Supplier Trade Secret	= 1000 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 11.7 mg/L (Rat) 4 h
Supplier Trade Secret	= 193 mg/kg (Rat)	= 63 mg/kg (Rabbit)	= 0.47 mg/L (Rat) 4 h
Supplier Trade Secret	= 5480 mg/kg (Rat)	-	= 285 g/m^3 (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Supplier Trade Secret	A3	Group 2A	Reasonably Anticipated	X
Supplier Trade Secret	A2	Group 1	Known	X
Glass, oxide 65997-17-3	-	Group 3	-	-
Supplier Trade Secret	A3	Group 2A	Reasonably Anticipated	X
Supplier Trade Secret	A3	Group 1	Reasonably Anticipated	X
Supplier Trade Secret	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child. May cause harm to breastfed babies.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Supplier Trade Secret	No data available	96h LC50: = 0.44 mg/L (Cyprinus carpio) 96h LC50: = 1.17 mg/L (Oncorhynchus mykiss) 96h LC50: = 1.32 mg/L (Oncorhynchus mykiss)	No data available	48h EC50: = 600 µg/L (water flea)
Supplier Trade Secret	No data available	96h LC50: > 500 mg/L (Brachydanio rerio)	No data available	No data available
Supplier Trade Secret	72h EC50: = 1.4 mg/L (Pseudokirchneriella subcapitata) 96h EC50: = 0.72 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.46 - 4.3 mg/L (Pseudokirchneriella subcapitata) 96h EC50: 0.15 - 3.2 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 3.24 - 4.99 mg/L (Pimephales promelas) 96h LC50: 19.03 - 33.53 mg/L (Lepomis macrochirus) 96h LC50: 6.75 - 14.5 mg/L (Pimephales promelas) 96h LC50: 58.75 - 95.32 mg/L (Poecilia reticulata)	EC50 = 5.4 mg/L 5 min	48h EC50: 3.3 - 7.4 mg/L (Daphnia magna)
Supplier Trade Secret	No data available	96h LC50: 6.7 - 15 mg/L (Pimephales promelas) 96h LC50: 8.0 - 12.0 mg/L (Lepomis macrochirus) 96h LC50: = 33.5 mg/L (Poecilia reticulata) 96h LC50: = 25 mg/L (Brachydanio rerio) 96h LC50: = 24 mg/L (Oncorhynchus mykiss) 96h LC50: = 18.07 mg/L (Cyprinus carpio) 96h LC50: 8.7 - 10 mg/L (Lepomis macrochirus) 96h LC50: 28 - 39 mg/L (Pimephales promelas)	EC50 = 254 mg/L 30 min EC50 = 367 mg/L 15 min EC50 = 495 mg/L 5 min EC50 = 6 mg/L 24 h	48h EC50: = 7.38 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation

.

Component Information

Chemical name	Partition coefficient
Supplier Trade Secret	2.96
Supplier Trade Secret	1.05
Supplier Trade Secret	1.99

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

TDG Not applicable
- **Proper Shipping Name** NON REGULATED
- **Hazard Class** N/A

DOT NOT REGULATED
- **Proper Shipping Name** NON-REGULATED
- **Hazard Class** N/A
- **Emergency Response Guide Number** 154

MEX Not applicable

ICAO Not applicable

IATA Not applicable
- **Proper Shipping Name** NON REGULATED
- **Hazard Class** N/A

IMDG/IMO Not applicable
- **Hazard Class** N/A
- **EmS-No.** F-A, S-B

RID Not applicable

ADR Not applicable
- **Tunnel restriction code** (E)

ADN Not applicable

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. OTHER INFORMATION

NFPA	**Health hazards**	3	**Flammability**	0	**Instability** 0	**Physical and Chemical Properties** -	
HMIS	**Health hazards**	3 *	**Flammability**	0	**Physical hazards** 0	**Personal Protection**	X

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Disclaimer
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End of Safety Data Sheet