

Safety Data Sheet

BATTERY - 12 VDC AGM

SDS Revision Date:

10/10/2016



1. Identification

1.1. Product identifier

Product Identity 14-100923-000 BATTERY - 12 VDC AGM

Alternate Names R8-040000-000 MNC- PKG BATTERY - 12 VDC AGM (PAIR)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use Battery

Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Brunswick Bowling Products, LLC
525 W. Laketon Ave.
Muskegon, MI 49441 USA

Emergency

24 hour Emergency Telephone No. (CHEMTEL) US: 1-800-255-3924
International: +01-813-248-0585

Customer Service: Brunswick Bowling Products, LLC 231-725-4966

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Acute Tox. 5;H303	May be harmful if swallowed. (Not adopted by US OSHA)
Lact.;H362	May cause harm to breast-fed children.
Skin Corr. 1A;H314	Causes severe skin burns and eye damage.
Eye Dam. 1;H318	Causes serious eye damage.
Carc. 2;H351	Suspected of causing cancer.
Repr. 1;H360	May damage fertility or the unborn child.
STOT RE 2;H373	May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Not Available)
Aquatic Chronic 2;H411	Toxic to aquatic life with long lasting effects.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

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Danger

- H303 May be harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H351 Suspected of causing cancer.
- H360 May damage fertility or the unborn child.
- H362 May cause harm to breast-fed children.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

[Prevention]:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust / fume/ mist / vapors / spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P263 Avoid contact during pregnancy / while nursing.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves / eye protection / face protection.

[Response]:

- P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
- P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
- P308+313 IF exposed or concerned: Get medical advice / attention.
- P310 Immediately call a POISON CENTER or doctor / physician.
- P314 Get Medical advice / attention if you feel unwell.

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P331 Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

[Storage]:

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Lead Compounds (as Pb) CAS Number: 0007439-92-1	75 - 100	Carc. 2;H351 Repr. 1A;H360Fd Lact.;H362	[1][2]
Lead oxide (PbO₂) CAS Number: 0001309-60-0	10 - 25	Ox. Sol. 3;H272 Acute Tox. 4;H302 Acute Tox. 4;H332 Repr. 1;H360 STOT RE 2;H373 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1]
Sulfuric acid CAS Number: 0007664-93-9	10 - 25	Skin Corr. 1A;H314 (> 15%)	[1][2]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

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Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion Do NOT induce vomiting. Rinse mouth and slowly drink several glasses of water. Call a physician. Do NOT give anything by mouth to an unconscious or convulsing person.

4.2. Most important symptoms and effects, both acute and delayed

Overview **IMMEDIATE CONCERNS:** CAUTION: May cause eye or skin burns. Avoid vapor.
POTENTIAL SIDE EFFECTS
EYES: Tissue destruction and permanent eye damage may occur if not treated immediately.
SKIN: May be corrosive and cause severe burns.
INGESTION: Corrosive to mucous membranes of the mouth, esophagus, stomach & throat.
INHALATION: Avoid mist, can be a severe irritant.
ACUTE TOXICITY: Eye, skin, lung burning may be caused with exposure to mist. Avoid mist.
TARGET ORGAN STATEMENT: Contains material which may cause damage to gastrointestinal tract and respiratory tract. Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 3 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure. See section 2 for further details.

Eyes Causes serious eye damage.

Skin Causes severe skin burns and eye damage.

Ingestion May be harmful if swallowed. (Not adopted by US OSHA)

5. Fire-fighting measures

5.1. Extinguishing media

Carbon dioxide; foam; dry chemical. Avoid breathing vapors. Use appropriate media for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Sulfuric Acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen sulfide.

Lead Compounds: High temperatures likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

Do not breathe dust / fume/ mist / vapors / spray.

Do not get in eyes, on skin, or on clothing.

Avoid contact during pregnancy / while nursing.

5.3. Advice for fire-fighters

Highly flammable hydrogen gas is generated during charging and operation of batteries. To avoid risk of fire or explosion, keep sparks or other sources of ignition away from batteries. Do not allow metallic materials to

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simultaneously contact negative and positive terminals of cells and batteries. Follow manufacturer's instructions for installation and service.

If batteries are on charge, shut off power. Use positive pressure, self-contained breathing apparatus. Water applied to electrolyte generates heat and causes it to spatter. Wear acid-resistant clothing, gloves, face and eye protection. Note that strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down.

ERG Guide No. 147

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Stop flow of material, contain/absorb small spills with dry sand, earth, and vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of unneutralized acid to sewer. Acid must be managed in accordance with local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

7. Handling and storage

7.1. Precautions for safe handling

Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. There may be increasing risk of electric shock from strings of connected batteries. Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components. Keep vent caps on and cover terminals to prevent short circuits. Place cardboard between layers of stacked automotive batteries to avoid damage and short circuits. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water. Use banding or stretch wrap to secure items for shipping.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Storage:

Store batteries in cool, dry, well-ventilated areas with impervious surfaces and adequate containment in the event of spills. Batteries should also be stored under roof for protection against adverse weather conditions. Separate from incompatible materials. Store and handle only in areas with adequate water supply and spill control. Avoid damage to

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containers. Keep away from fire, sparks and heat. Keep away from metallic objects which could bridge the terminals on a battery and create a dangerous short-circuit.

Charging:

There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas. Charging space should be ventilated. Keep battery vent caps in position. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near batteries being charged.

Incompatible materials: Sulfuric Acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.

Lead Compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0001309-60-0	Lead oxide (PbO ₂)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007439-92-1	Lead Compounds (as Pb)	OSHA	[1910.1025] TWA 0.050 mg/m ³
		ACGIH	TWA: 0.05 mg/m ³ R, 2B, 2A
		NIOSH	TWA (8-hour) 0.050 mg/m ³
		Supplier	No Established Limit
0007664-93-9	Sulfuric acid	OSHA	TWA 1 mg/m ³
		ACGIH	TWA: 0.2 mg/m ³ A1, 1, Revised 2004,
		NIOSH	TWA 1 mg/m ³
		Supplier	No Established Limit

8.2. Exposure controls

Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes

If battery case is damaged, use chemical goggles or face shield.

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- Skin** Under severe exposure emergency conditions, wear acid-resistant clothing and boots. If battery case is damaged, use rubber or plastic acid-resistant gloves with elbow-length gauntlet, acid-resistant apron, clothing and boots.
- Engineering Controls** Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
- Other Work Practices** Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Cell Battery Solid
Odor	Odorless
Odor threshold	Not determined
pH	~1 to 2
Melting point / freezing point	Not Applicable
Initial boiling point and boiling range	203 - 240° F
Flash Point	Below room temperature (as hydrogen gas)
Evaporation rate (Ether = 1)	Less than 1
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: LEL = 4.1% (Hydrogen Gas) Upper Explosive Limit: UEL = 74.2% (Hydrogen Gas)
Vapor pressure (Pa)	(mm Hg): 10
Vapor Density	(AIR = 1): Greater than 1
Specific Gravity	(H2O = 1): 1.215 to 1.350
Solubility in Water	100%
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not Applicable
Viscosity (cSt)	Not Applicable

9.2. Other information

No other relevant information.

10. Stability and reactivity

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10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

Reacts with some bases.

10.4. Conditions to avoid

Prolonged overcharge; sources of ignition.

10.5. Incompatible materials

Sulfuric Acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.

Lead Compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.

10.6. Hazardous decomposition products

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

Lead Compounds: High temperatures likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Lead Compounds (as Pb) - (7439-92-1)	No data available	No data available	No data available	No data available	No data available
Lead oxide (PbO ₂) - (1309-60-0)	No data available	No data available	No data available	No data available	No data available
Sulfuric acid - (7664-93-9)	2,140.00, Rat - Category: 5	No data available	No data available	No data available	No data available

Carcinogen Data

CAS No.	Ingredient	Source	Value
0001309-60-0	Lead oxide (PbO ₂)	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

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0007439-92-1	Lead Compounds (as Pb)	OSHA	Select Carcinogen: Yes
		NTP	Known: No; Suspected: Yes
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0007664-93-9	Sulfuric acid	OSHA	Select Carcinogen: No
		NTP	Known: Yes; Suspected: No
		IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed. (Not adopted by US OSHA)
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1A	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	2	Suspected of causing cancer.
Reproductive toxicity	1	May damage fertility or the unborn child.
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	2	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Lead Compounds (as Pb) - (7439-92-1)	0.44, Not Defined	4.40, Daphnia magna	0.25 (72 hr), Scenedesmus subspicatus

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Lead oxide (PbO ₂) - (1309-60-0)	Not Available	Not Available	Not Available
Sulfuric acid - (Proprietary)	42.00, Gambusia affinis	42.50, Pandalus montagui	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

U.S. DOT: Excepted from the hazardous materials regulations(HMR) because the batteries meet the requirements of 49 CFR 173.159(f) and 49 CFR 173.159a of the U.S. Department of Transportation's HMR. Battery and outer package must be marked " NONSPILLABLE" or "NONSPILLABLE BATTERY". Battery terminals must be protected against short circuits.

IATA Dangerous Goods Regulations DGR: Excepted from the dangerous goods regulations because the batteries meet the requirements of Packing Instruction 872 and Special Provisions A67 of the International Air Transportation Association (IATA) Dangerous goods Regulations and International Civil Aviation Org (ICAO) Technical Instructions. Battery Terminals must be protected against short circuits. The words "NOT RESTRICTED", SPECIAL PROVISION A67" must be provided.

IMDG: Excepted from the dangerous goods regulations for transport by sea because the batteries meet the requirements of Special Provision 238 of the International Maritime Dangerous Goods(IMDG). Battery terminals must be protected against short circuits.

Requirements for Safe Shipping and Handling of Cyclon Cells: Warning– Electrical Fire Hazard – Protect against shorting. Terminals can short and cause a fire if not insulated during shipping. Cyclon product must be labeled "NONSPILLABLE" during shipping. Follow all federal shipping regulations. See section IX and CFR 49 Parts 171 through 180.

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Requirements for Shipping Cyclon Product as Single Cells: Protective caps or other durable inert material must be used to insulate each terminal of each cell unless cells are shipping in the original packaging from EnerSys, in full box quantities. Protective caps are available for all cell sizes fr EnerSys 1-800-964-2837

Requirements for Shipping Cyclon Product Assembled Into Multicell Batteries: Assembled batteries must have short circuit protection during shipping. Exposed terminals/connectors/lead wires must be insulated to prevent exposure during shipping.

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D2A E
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: Yes Immediate (Acute): Yes Delayed (Chronic): Yes

Note: Strong inorganic acid mists containing sulfuric acid are listed on the California Proposition 65 Carcinogen List. [Sulfuric acid, in and of itself, is not listed under Proposition 65. However, if one has sulfuric acid, which through its intended use generates an acid mist that in turn contains sulfuric acid that would meet the listing. The term "strong" does not refer to the concentration of the acid, but rather the strength of the acid. The basis for the listing of strong inorganic acid mists containing sulfuric acid was the formal identification by the National Toxicology Program (NTP), in its Ninth Report on Carcinogens, that this chemical mixture is "known to be a human carcinogen." (Public notice available at http://www.oehha.ca.gov/prop65/CRNR_notices/admin_listing/intent_to_list/noil19b4.html.)]

EPCRA 311/312 Chemicals and RQs (lbs):

Lead Compounds (as Pb) (10.00)
Sulfuric acid (1,000.00)

EPCRA 302 Extremely Hazardous:

Sulfuric acid

EPCRA 313 Toxic Chemicals:

Lead Compounds (as Pb)
Sulfuric acid

Proposition 65 - Carcinogens (>0.0%):

Lead Compounds (as Pb)

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Lead oxide (PbO₂)

Proposition 65 - Developmental Toxins (>0.0%):

Lead Compounds (as Pb)

Proposition 65 - Female Repro Toxins (>0.0%):

Lead Compounds (as Pb)

Proposition 65 - Male Repro Toxins (>0.0%):

Lead Compounds (as Pb)

New Jersey RTK Substances (>1%):

Lead Compounds (as Pb)

Lead oxide (PbO₂)

Sulfuric acid

Pennsylvania RTK Substances (>1%):

Lead Compounds (as Pb)

Sulfuric acid

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H360Fd May damage fertility. Suspected of damaging the unborn child.

H362 May cause harm to breast-fed children.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material in any process, unless specified in the text.

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