SAFETY DATA SHEET

1. Identification

Product identifier: Battery Cleaner with Acid Indicator
Other means of identification:
- Product Code: No. 06023 (Item# 1003890)
- Recommended use: Battery cleaner
- Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:
- Company name: CRC Industries, Inc.
- Address: 885 Louis Dr., Warminster, PA 18974 US
- Telephone: 215-674-4300
- General Information: 800-521-3168
- Technical Assistance: 800-521-3168
- Customer Service: 800-272-4620
- 24-Hour Emergency (CHEMTREC): 703-527-3887 (International)
- Website: www.crcindustries.com

2. Hazard(s) Identification

Physical hazards: Gases under pressure; Liquefied gas
Health hazards: Not classified.
Environmental hazards: Not classified.
OSHA defined hazards: Not classified.

Label elements

Signal word: Warning
Hazard statement: Contains gas under pressure; may explode if heated.
Precautionary statement:
Prevention: Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying.
Response: Wash hands after handling.
Storage: Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.
Disposal: Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC): None known.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>7732-18-5</td>
<td>80 - 90</td>
<td></td>
</tr>
<tr>
<td>liquefied petroleum gas</td>
<td>68476-86-8</td>
<td>5 - 10</td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>1 - 3</td>
<td></td>
</tr>
</tbody>
</table>
4. First-aid measures

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Move to fresh air. Call a physician if symptoms develop or persist.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Rinse skin with water/shower. Get medical attention if irritation develops and persists.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Rinse with water. Get medical attention if irritation develops and persists.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Call a POISON CENTER or doctor/physician.</td>
</tr>
<tr>
<td>Most important</td>
<td>Direct contact with eyes may cause temporary irritation.</td>
</tr>
<tr>
<td>symptoms/effects,</td>
<td>Provide general supportive measures and treat symptomatically.</td>
</tr>
<tr>
<td>acute and delayed</td>
<td></td>
</tr>
</tbody>
</table>

5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable extinguishing media</td>
<td>Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).</td>
</tr>
<tr>
<td>Unsuitable extinguishing media</td>
<td>Do not use water jet as an extinguisher, as this will spread the fire.</td>
</tr>
<tr>
<td>Specific hazards arising from the chemical</td>
<td>During fire, gases hazardous to health may be formed.</td>
</tr>
<tr>
<td>Special protective equipment and precautions for firefighters</td>
<td>Self-contained breathing apparatus and full protective clothing must be worn in case of fire.</td>
</tr>
<tr>
<td>Fire-fighting equipment/instructions</td>
<td>In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.</td>
</tr>
<tr>
<td>General fire hazards</td>
<td>Contents under pressure. Pressurized container may rupture when exposed to heat or flame.</td>
</tr>
</tbody>
</table>

6. Accidental release measures

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal precautions, protective equipment and emergency procedures</td>
<td>Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.</td>
</tr>
<tr>
<td>Methods and materials for containment and cleaning up</td>
<td>Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.</td>
</tr>
<tr>
<td>Environmental precautions</td>
<td>Avoid discharge into drains, water courses or onto the ground.</td>
</tr>
</tbody>
</table>

7. Handling and storage

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions for safe handling</td>
<td>Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Do not get in eyes, on skin, or on clothing. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. For product usage instructions, see the product label.</td>
</tr>
<tr>
<td>Conditions for safe storage, including any incompatibilities</td>
<td>Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).</td>
</tr>
</tbody>
</table>
8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>PEL</td>
<td>240 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>24 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

Biological limit values

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>200 mg/g</td>
<td>Butyoxacetic acid (BAA), with hydrolysis</td>
<td>Creatinine in urine</td>
<td></td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation
2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies
2-butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation
2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation
2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection
Wear protective gloves such as: Nitrile.

Other
Wear suitable protective clothing.

Respiratory protection
If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state
Liquid.
Aerosol.

Form: Aerosol.
Color: Colorless.
Odor: Odorless.
Odor threshold: Not available.
pH: 8.5
Melting point/freezing point: -103 °F (-75 °C) estimated
Initial boiling point and boiling range: 212 °F (100 °C) estimated
Flash point: None (Tag Closed Cup)
Evaporation rate: Slow.
Flammability (solid, gas): Not available.
Upper/lower flammability or explosive limits
   Flammability limit - lower (%) estimated: 1.3%
   Flammability limit - upper (%) estimated: 10.6%
Vapor pressure: 266.4 hPa estimated
Vapor density: > 1 (air = 1)
Relative density: 1.01
Solubility (water): Soluble.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: 446 °F (230 °C) estimated
Decomposition temperature: Not available.
Viscosity (kinematic): Not available.
Percent volatile: 94.2 % estimated

10. Stability and reactivity
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials: Carbon oxides.
Hazardous decomposition products: Strong oxidizing agents.

11. Toxicological information

Information on likely routes of exposure
Inhalation: Prolonged inhalation may be harmful.
Skin contact: 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact: Direct contact with eyes may cause temporary irritation.
Ingestion: May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics: Direct contact with eyes may cause temporary irritation.

Information on toxicological effects
Acute toxicity
### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>1300 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation**

Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation**

Direct contact with eyes may cause temporary irritation.

**Respiratory sensitization**

Not a respiratory sensitizer.

**Skin sensitization**

This product is not expected to cause skin sensitization.

**Germ cell mutagenicity**

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

- **IARC Monographs. Overall Evaluation of Carcinogenicity**
  - 2-butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.
  - Not regulated.
- **US. National Toxicology Program (NTP) Report on Carcinogens**
  - Not listed.

**Reproductive toxicity**

This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**

Not classified.

**Specific target organ toxicity - repeated exposure**

Not classified.

**Aspiration hazard**

Not an aspiration hazard.

**Chronic effects**

May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

### 12. Ecological information

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>1550 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>&gt;= 1000 mg/l, 96 hours</td>
</tr>
<tr>
<td>Water flea (Daphnia magna)</td>
<td>Rainbow trout, donaldson trout (Oncorhynchus mykiss)</td>
<td></td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

- **Partition coefficient n-octanol / water (log Kow)**
  - 2-butoxyethanol 0.81, log Pow

**Mobility in soil**

No data available.

**Other adverse effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
13. Disposal considerations

Disposal of waste from residues / unused products: The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

Hazardous waste code: Not regulated.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number: UN1950
UN proper shipping name: Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)

Class: 2.2
Subsidiary risk: -
Label(s): 2.2
Packing group: Not applicable.
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions: 306
Packaging non bulk: None
Packaging bulk: None

IATA

UN number: UN1950
UN proper shipping name: Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)

Class: 2.2
Subsidiary risk: -
Packing group: Not applicable.
ERG Code: 2L
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
Other information

Passenger and cargo aircraft: Allowed with restrictions.
Cargo aircraft only: Allowed with restrictions.

IMDG

UN number: UN1950
UN proper shipping name: AEROSOLS, Limited Quantity
Transport hazard class(es)

Class: 2
Subsidiary risk: -
Packing group: Not applicable.
Environmental hazards

Marine pollutant: No.
EmS: Not available.
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

2-butoxyethanol (CAS 111-76-2)
CERCLA Hazardous Substance List (40 CFR 302.4)
2-butoxyethanol (CAS 111-76-2)  Listed.

CERCLA Hazardous Substances: Reportable quantity
Not listed.
Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

Food and Drug Administration (FDA)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No
SARA 302 Extremely hazardous substance  No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
2-butoxyethanol (CAS 111-76-2)
liquefied petroleum gas (CAS 68476-86-8)

US. New Jersey Worker and Community Right-to-Know Act
2-butoxyethanol (CAS 111-76-2)

US. Massachusetts RTK - Substance List
2-butoxyethanol (CAS 111-76-2)

US. Pennsylvania Worker and Community Right-to-Know Law
2-butoxyethanol (CAS 111-76-2)

US. Rhode Island RTK
2-butoxyethanol (CAS 111-76-2)

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
1,4-dioxane (CAS 123-91-1)  Listed: January 1, 1988
ethylene oxide (CAS 75-21-8)  Listed: July 1, 1987

US - California Proposition 65 - CRT: Listed date/Developmental toxin
ethylene oxide (CAS 75-21-8)  Listed: August 7, 2009

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin
ethylene oxide (CAS 75-21-8)  Listed: February 27, 1987

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin
ethylene oxide (CAS 75-21-8)  Listed: August 7, 2009

Volatile organic compounds (VOC) regulations

EPA
VOC content (40 CFR 51.100(s))  7.9 %
Consumer products (40 CFR 59, Subpt. C)  Not regulated

State
Consumer products  Not regulated
VOC content (CA)  7.9 %
VOC content (OTC)  7.9 %
International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date: 10-12-2017
Prepared by: Allison Yoon
Version #: 01

Further information: CRC # 530C/1002544
HMIS® ratings:
- Health: 1
- Flammability: 0
- Physical hazard: 0
- Personal protection: B

NFPA ratings:
- Health: 1
- Flammability: 0
- Instability: 0

Disclaimer:
The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC’s knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

Revision Information:
Product and Company Identification: Product Codes
Composition/information on ingredients: Component information
Fire-fighting measures: Suitable extinguishing media
Handling and storage: Precautions for safe handling
Physical and chemical properties: Color
Ecological Information: Ecotoxicity
Transport information: General information
Other information, including date of preparation or last revision: Disclaimer
Other information, including date of preparation or last revision: Further information