



SAFETY DATA SHEET

1. Identification

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|---------------------------------------------------------------|---------------------------------------------------|
| Product identifier | Battery Cleaner |
| Other means of identification | |
| Product code | 03176 |
| Recommended use | Battery cleaner |
| Recommended restrictions | None known. |
| Manufacturer/Importer/Supplier/Distributor information | |
| Manufacturer | |
| Company name | CRC Industries, Inc. |
| Address | 885 Louis Dr. Warminster, PA 18974 US |
| Telephone | |
| General Information | 215-674-4300 |
| Technical Assistance | 800-521-3168 |
| Customer Service | 800-272-4620 |
| 24-Hour Emergency (CHEMTREC) | 800-424-9300 (US) 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 waste and residues in accordance with local authority requirements. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | Not applicable. |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------|--------------------------|------------|---------|
| Water | | 7732-18-5 | 80 - 90 |
| Liquefied Petroleum Gas | | 68476-86-8 | 5 - 10 |
| 2-Butoxyethanol | | 111-76-2 | 1 - 3 |

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

| | |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Inhalation | If symptoms develop move victim to fresh air. Get medical attention if symptoms persist. |
| Skin contact | Wash off with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Rinse with water. Get medical attention if irritation develops and persists. |
| Ingestion | Call a POISON CENTER or doctor/physician. |
| Most important symptoms/effects, acute and delayed | Direct contact with eyes may cause temporary irritation. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire-fighting measures

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|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media | Water. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | Contents under pressure. |
| Special protective equipment and precautions for firefighters | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |
| Fire-fighting equipment/instructions | In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. |

6. Accidental release measures

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|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | 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 leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: 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. |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for safe handling | 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. Do not re-use empty containers. Do not get this material in contact with skin. Avoid prolonged exposure. Wear appropriate personal protective equipment. Use only in well-ventilated areas. 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. Observe good industrial hygiene practices. For product usage instructions, please see the product label. |
| Conditions for safe storage, including any incompatibilities | Level 1 Aerosol. 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). |

8. Exposure controls/personal protection

Occupational exposure limits

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

| Components | Type | Value |
|--------------------------------|------|---------------------------------|
| 2-Butoxyethanol (CAS 111-76-2) | PEL | 240 mg/m ³ 50 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|--------------------------------|------|--------|
| 2-Butoxyethanol (CAS 111-76-2) | TWA | 20 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|--------------------------------|------|-------------------------------|
| 2-Butoxyethanol (CAS 111-76-2) | TWA | 24 mg/m ³ 5 ppm |

Biological limit values

ACGIH Biological Exposure Indices

| Components | Value | Determinant | Specimen | Sampling Time |
|--------------------------------|----------|------------------------------------------|---------------------|---------------|
| 2-Butoxyethanol (CAS 111-76-2) | 200 mg/g | Butoxyacetic acid (BAA), with hydrolysis | Creatinine in urine | * |

* - 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 appropriate chemical resistant clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. 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.

Form Aerosol.

Color Clear.

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 (Closed Cup) |
| Evaporation rate | Slow. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | 1.3 % estimated |
| Flammability limit - upper (%) | 10.6 % estimated |
| Vapor pressure | 268.5 hPa estimated |
| Vapor density | > 1 (air = 1) |
| Relative density | 1.04 |
| 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

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|-------------------------------------------|-----------------------------------------------------------------------------------------------|
| 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 | Contact with incompatible materials. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | Carbon oxides. |

11. Toxicological information

Information on likely routes of exposure

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|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ingestion | Expected to be a low ingestion hazard. |
| 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. |

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not available.

| Product | Species | Test Results |
|-------------------|----------------|-------------------------------------------------------------------------|
| Battery Cleaner | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 7723.0923 mg/kg estimated |
| <i>Inhalation</i> | | |
| LC50 | Rat | 15797.2334 mg/l, 4 hours estimated 15797.2334 ppm, 4 hours estimated |
| <i>Oral</i> | | |
| LD50 | Rat | 16499.332 mg/kg estimated |

| Product | Species | Test Results |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Chronic <i>Inhalation</i> LC50 | Rat | 83.1988 mg/l estimated |
| * 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 available. | |
| 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 | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| 2-Butoxyethanol (CAS 111-76-2) | 3 Not classifiable as to carcinogenicity to humans. | |
| 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 available. | |
| Chronic effects | Prolonged inhalation may be harmful. 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

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|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------|
| 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. | | |
| Product | Species | Test Results | |
| Battery Cleaner | | | |
| <i>Acute</i> | | | |
| Crustacea | EC50 | Daphnia | 54412.6953 mg/l, 48 hours estimated |
| Fish | LC50 | Fish | 53543.8477 mg/l, 96 hours estimated |
| Components | Species | Test Results | |
| 2-Butoxyethanol (CAS 111-76-2) | | | |
| Aquatic | | | |
| <i>Acute</i> | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1550 mg/l, 48 hours |
| Fish | LC50 | Rainbow trout, donaldson trout (Oncorhynchus mykiss) | > 1000 mg/l, 96 hours |

* 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 | No data available. | | |
| 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

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|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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/international 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. |
| Environmental hazards | No. |
| ERG Code | 10L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Other information | |
| Passenger and cargo aircraft | Allowed. |
| Cargo aircraft only | Allowed. |

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.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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)

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) | |
| Section 311/312 Hazard categories | Immediate Hazard - No Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - Yes Reactivity Hazard - No |
| SARA 302 Extremely hazardous substance | No |

US state regulations

US. New Jersey RTK - Substances: Listed substance

2-Butoxyethanol (CAS 111-76-2)

US. Massachusetts RTK - Substance List

2-Butoxyethanol (CAS 111-76-2)

US. Pennsylvania RTK - Hazardous Substances

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

International Inventories

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

*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 | 09-18-2013 |
| Prepared by | Allison Cho |
| Version # | 01 |
| Further information | CRC# 530B |
| HMIS® ratings | Health: 1* Flammability: 0 Physical hazard: 0 Personal protection: B |
| NFPA ratings | Health: 1 Flammability: 0 Instability: 0 |
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