

PRODUCT NAME: ABRO Battery Terminal Cleaner  
PRODUCT NUMBER/SIZE: BC-575

Revision Date: 2/06/2017

## SECTION 1 Identification of the Substance and of the Company/Undertaking

MANUFACTURER'S NAME: ABRO INDUSTRIES, INC.  
ADDRESS: 3580 Blackthorn Court  
South Bend, IN 46628  
USA  
PRODUCT DESCRIPTION: Cleaner  
COMPANY PHONE: 574-232-8289  
EMERGENCY 24-HR TELEPHONE: Chemtrec: US/Canada 1-800-424-9300  
International +1-703-527-3887

## SECTION 2 Hazards Identification

### Classification:

Physical hazards	Flammable Aerosols	Category 1
Health hazards	Not Classified.	
OSHA defined hazards	Not classified.	

### Label Pictogram(s):



Signal Word: DANGER

Hazard Phrases: Extremely flammable aerosol.

Precautionary Phrases: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

Response: Wash hands after handling.

Storage / Disposal: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known  
Supplemental Information None

### SECTION 3 Composition/Information on Ingredients

COMPONENTS	CAS Number	Percent by weight
Butane	106-97-8	2.5-10%
2-Butoxyethanol	111-76-2	1-2.5
Propane	74-98-6	1-2.5
Other components below reportable levels		90-100%

### SECTION 4 First Aid Measures

#### First Aid Measures

<b>Immediate Medical Attention:</b>	Treat symptomatically.
<b>Eye Contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Skin Contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Inhalation</b>	If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.
<b>Most important symptoms/effects, acute and delayed:</b>	Direct contact with eyes may cause temporary irritation.
<b>General Information:</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### SECTION 5 Fire Fighting Measures

<b>Suitable extinguishing media</b>	Not available.
<b>Unsuitable Extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical:</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
<b>Protective Equipment and Precautions for firefighters:</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
<b>Fire fighting equipment/instructions</b>	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.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of

**General fire hazards**

other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.  
Extremely flammable aerosol.

## SECTION 6 Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. 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

**Methods/materials for containment and cleanup:**

Refer to attached safety data sheets and/or instructions for use. 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. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. For waste disposal, see section 13 of the SDS.

**Environmental precautions:**

Avoid discharge into drains, water courses or onto the ground.

## SECTION 7 Handling and Storage

**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. All equipment used when handling the product must be grounded. Do not re-use empty containers. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for Safe Storage**

Level 1 Aerosol  
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

## SECTION 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 <sup>3</sup>
Propane (CAS 74-98-6)	PEL	50 ppm 1800 mg/m <sup>3</sup> 1000 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m <sup>3</sup>
Butane (CAS 106-97-8)	TWA	5 ppm 1900 mg/m <sup>3</sup> 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m <sup>3</sup> 1000 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 appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Other** Wear suitable protective clothing.

**Respiratory protection** If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

**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.

## SECTION 9 Physical and Chemical Properties

<b>Appearance</b>	
<b>Physical State:</b>	Gas
<b>Form:</b>	Aerosol.
<b>Color:</b>	Not available.
<b>Odor:</b>	Not available
<b>Odor Threshold:</b>	Not available
<b>pH:</b>	Not available
<b>Melting Point/Freezing Point:</b>	Not available
<b>Initial boiling point &amp; boiling range:</b>	212 °F (100 °C) estimated
<b>Flash Point:</b>	-156.0 °F (-104.4 °C) PROPELLANT estimated
<b>Evaporation rate:</b>	Not available
<b>Flammability (solid, gas)</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower</b>	Not available
<b>Flammability limit - upper</b>	Not available
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	Not available
<b>Relative density / Specific gravity</b>	Not available
<b>Solubility</b>	Not available
<b>Partition Coefficient n-Octanol/Water</b>	Not available
<b>Auto-ignition Temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Viscosity:</b>	Not available
<b>Other information:</b>	Not explosive
<b>Explosive properties</b>	
<b>Oxidizing properties</b>	Not oxidizing
<b>Specific gravity</b>	1.029 estimated

## SECTION 10 Stability and Reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with

incompatible materials.

**Incompatibilities:**

Strong oxidizing agents. Nitrates. Fluorine. Chlorine.

**Hazardous decomposition products:**

No hazardous decomposition products are known.

## SECTION 11 Toxicological Information

**Likely Routes of Exposure:**

**Inhalation** No adverse effects due to inhalation are expected.

**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** Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**

Direct contact with eyes may cause temporary irritation.

**Information on toxicological effects**

**Acute toxicity**

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Guinea pig	7.3 ml/kg, 4 Days
		0.23 ml/kg, 24 Hours
	Rabbit	435 mg/kg, 24 Hours
		0.68 ml/kg, 24 Hours
	Rat	0.63 ml/kg
<b>Inhalation</b>		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
<b>Oral</b>		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1414 mg/kg
	Mouse	1519 mg/kg
	Rat	1746 mg/kg

Butane (CAS 106-97-8)

**Acute**

**Inhalation**

LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l

Propane (CAS 74-98-6)

**Acute**

**Inhalation**

LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h

\* 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 or skin sensitization**

**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** Risk of cancer cannot be excluded with prolonged exposure.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

2-Butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

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 likely, due to the form of the product.

**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. Prolonged exposure may cause chronic effects.

## SECTION 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.

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
<b>Aquatic</b>		
Fish	LC50 Inland silverside ( <i>Menidia beryllina</i> )	1250 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

#### Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol	0.83
Butane	2.89
Propane	2.36

**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.

## SECTION 13 Disposal Considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations:</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous Waste Code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.



## SECTION 14

### Transport Information

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

<b>U.S. DOT</b>	UN/ID Number:	UN1950
	Proper shipping name:	Aerosols, flammable
	Hazard class:	2.1
	Packing Group:	None
	Special Precautions for User:	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
	Special Provisions:	N82
	Packaging Exceptions:	306
	Exceptions:	This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking.
<b>ICAO/IATA</b>	UN/ID Number:	UN1950
	Proper shipping name:	Aerosols, flammable
	Hazard class:	2.1
	Packing Group:	None
	Environmental hazards	No
	ERG code	10L
	Special precautions for user:	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
	Exceptions:	May be shipped as a limited quantity
<b>IMDG</b>	UN/ID Number:	UN1950
	Proper shipping name:	Aerosols
	Hazard Class:	2.1
	Packing Group:	None
	Marine Pollutant	No
	EmS	F-D, S-U
	Packaging Exceptions	May be shipped as limited quantity
	Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

## SECTION 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.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed

**SARA 311/312 Hazardous Chemical No**

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
2-Butoxyethanol	111-76-2	1-2.5

**Other federal regulations**

**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)**

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

**Safe Drinking Water Act** Not regulated.

**(SDWA)**

**US state regulations**

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

**US. Massachusetts RTK - Substance List**

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

#### US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

#### US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

#### US. Rhode Island RTK

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

#### US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

#### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Diethanolamine (CAS 111-42-2) Listed: June 22, 2012

#### 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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
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).

### SECTION 16 Other Information

We believe all information given is accurate. It is offered in good faith but without guarantee. Since conditions of use are beyond our control, user assumes all responsibility and risk.

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

**ABBREVIATIONS:**

NG="NOT GIVEN"

<="LESS THAN"

ND = Not Determined

BT="BETWEEN"

>="GREATER THAN"

NA = Not Applicable