

# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product number** 74106  
**Material name** 18 OZ BATTERY TERMINAL CLEANER AND PROTECTOR  
**Company information** IBS, Inc.  
P.O. Box 1717  
Auburn, WA 98071-1717  
**Company phone** General Assistance 800-678-1906  
**Emergency telephone US** 1-800-255-3924  
**Emergency telephone outside US** 1-813-248-0573  
**Version #** 01  
**Expiry Date** 29-Aug-2017  
**Product use** Cleaner

## 2. Hazards Identification

**Emergency overview** Flammable aerosol. CONTENTS UNDER PRESSURE.  
Pressurized container may explode when exposed to heat or flame. Yields a flame projection at full valve opening or a flashback at any degree of valve opening. Will be easily ignited by heat, spark or flames. May be fatal if inhaled. Very toxic. Irritating to eyes and skin.

**Potential health effects**

**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact.

**Eyes** Do not get this material in contact with eyes.

**Skin** May be harmful if absorbed through skin. Do not get this material in contact with skin. May cause skin irritation.

**Inhalation** Very toxic by inhalation. Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Do not breathe vapor.

**Ingestion** Exposure by ingestion of an aerosol is unlikely. Irritating. May cause nausea, stomach pain and vomiting. Do not ingest.

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

**Chronic effects** May be harmful if absorbed through skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

**Signs and symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms are prostration, gasping, pallor, and uncoordinated movements. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Potential environmental effects** May cause long-term adverse effects in the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Butane	106-97-8	1 - 5
Ethylene Glycol Monobutyl Ether	111-76-2	1 - 5
Sodium Carbonate	497-19-8	1 - 5
Propane	74-98-6	0.5 - 1.5
Other components below reportable levels		60 - 100

## 4. First Aid Measures

### First aid procedures

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Notes to physician</b>	Treat symptomatically. Symptoms may be delayed.
<b>General advice</b>	Immediate medical attention is required. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Flammable by WHMIS criteria. Heat may cause the containers to explode. Ruptured cylinders may rocket. Vapors may travel considerable distance to a source of ignition and flash back.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Protection of firefighters</b>	
<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 for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Move containers from fire area if you can do so without risk. Do not direct water at source of leak or safety devices as icing may occur. 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. Some of these materials, if spilled, may evaporate leaving a flammable residue.
<b>Explosion data</b>	
<b>Sensitivity to static discharge</b>	Not available.
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Hazardous combustion products</b>	Not available.
<b>General fire hazards</b>	Extremely flammable aerosol.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Pay attention to flashback. 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 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 MSDS.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.
<b>Methods for containment</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Move the cylinder to a safe and open area if the leak is irreparable. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of low areas. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	Ventilate the area. Should not be released into the environment. Stop the flow of material, if this is without risk. Isolate area until gas has dispersed. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.
<b>Other information</b>	Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

### 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. Use non-sparking tools and explosion-proof equipment. Do not re-use empty containers. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not get this material on clothing. When using do not eat or drink. Do not use in areas without adequate ventilation. Wear appropriate personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

### Storage

Level 1 Aerosol.

Keep locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. The pressure in sealed containers can increase under the influence of heat. 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 in a well-ventilated place. Refrigeration recommended. Keep away from food, drink and animal feedings. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the MSDS). Level 1 Aerosol (NFPA 30B)

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	20 ppm

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1000 ppm
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	97 mg/m3
		20 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Butane (CAS 106-97-8)	STEL	750 ppm
	TWA	600 ppm
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	20 ppm

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	20 ppm

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	800 ppm
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	20 ppm

#### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	97 mg/m3
		20 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3

Components	Type	Value
		1000 ppm
<b>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</b>		
Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	PEL	240 mg/m3
Propane (CAS 74-98-6)	PEL	50 ppm 1800 mg/m3 1000 ppm

**Biological limit values****ACGIH Biological Exposure Indices**

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

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

**Engineering controls** Explosion-proof general and local exhaust ventilation.

**Personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
<b>Respiratory protection</b>	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
<b>Hand protection</b>	Wear protective gloves.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Liquid.
<b>Physical state</b>	Gas.
<b>Form</b>	Aerosol. Compressed gas.
<b>Color</b>	orange
<b>Odor</b>	ammoniacal
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Vapor pressure</b>	50 psig @70F estimated
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	212 °F (100 °C) estimated
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Not available.
<b>Specific gravity</b>	1.039 estimated
<b>Relative density</b>	Not available.
<b>Flash point</b>	-156.0 °F (-104.4 °C) Propellant estimated
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.

**10. Chemical Stability & Reactivity Information**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

<b>Chemical stability</b>	Risk of explosion.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Aerosol containers are unstable at temperatures above 49°C. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Fire or intense heat may cause violent rupture of packages.
<b>Incompatible materials</b>	Strong oxidizing agents. Do not mix with other chemicals.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

Product	Species	Test Results
18 OZ TERND BATTERY TERM & CLNR PROT12PK (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	11332.8408 ml/kg, 24 Hours estimated
		359.6945 ml/kg, 4 Days estimated
	Rabbit	8014.645 mg/kg estimated
		6105.5503 ml/kg estimated
	Rat	94397.6328 mg/kg estimated
<i>Inhalation</i>		
LC100	Cat	2250 % estimated
LC50	Guinea pig	41666.668 mg/m3, 2 Hours estimated
	Mouse	62500 mg/m3, 2 Hours estimated
		30925 mg/l, 120 Minutes estimated
		1300 %, 120 Minutes estimated
		400.0001 mm/l, 2 Hours estimated
	Rabbit	19709.2871 ppm, 7 Hours estimated
	Rat	23529.4219 mg/l, 4 Hours estimated
		20759.166 ppm, 4 Hours estimated
		8741.7559 mg/l, If <1L: Consumer Commodity Hours estimated
		107.9716 mg/l/4h estimated
<i>Oral</i>		
LD100	Rabbit	34244.8867 mg/kg estimated
LD50	Dog	34244.8867 mg/kg estimated
	Guinea pig	59127.8633 mg/kg estimated
	Rat	17752.4043 mg/kg estimated
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Butane (CAS 106-97-8)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	230 ml/kg, 24 Hours
		7.3 ml/kg, 4 Days

Components	Species	Test Results
	Rabbit	450 ml/kg, 24 Hours 435 mg/kg, 24 Hours 220 mg/kg 0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours 2.21 mg/l/4h
<i>Oral</i>		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1200 mg/kg
	Rat	530 - 2800 mg/kg 470 mg/kg
Propane (CAS 74-98-6)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l 658 mg/l/4h
Sodium Carbonate (CAS 497-19-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Guinea pig	800 mg/m3, 2 Hours
	Mouse	1200 mg/m3, 2 Hours
	Rat	2300 mg/m3, 2 Hours
<i>Oral</i>		
LD50	Rat	2800 mg/kg
<b>Acute effects</b>	Expected to be a low hazard for usual industrial or commercial handling by trained personnel.	
<b>Sensitization</b>	Not available.	
<b>Local effects</b>	Very toxic by inhalation.	
<b>Chronic effects</b>	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.	
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
<b>ACGIH Carcinogens</b>		
	Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	A3 Confirmed animal carcinogen with unknown relevance to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
	Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Serious eye damage/irritation</b>	Direct contact with eyes may cause temporary irritation.	

<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Reproductive effects</b>	This product is not expected to cause reproductive or developmental effects.
<b>Teratogenicity</b>	Not available.
<b>Symptoms and target organs</b>	Direct contact with eyes may cause temporary irritation.
<b>Synergistic materials</b>	Not available.

## 12. Ecological Information

### Ecotoxicological data

Product		Species	Test Results
18 OZ TERND BATTERY TERM & CLNR PROT12PK (CAS Mixture)			
<b>Aquatic</b>			
Algae	IC50	Algae	16284.5547 mg/L, 72 Hours estimated
Crustacea	EC50	Daphnia	551.4603 mg/l, 48 hours estimated
Fish	LC50	Fish	1424.9493 mg/l, 96 hours estimated

Components		Species	Test Results
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	1819 mg/L, 48 Hours
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Sodium Carbonate (CAS 497-19-8)			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	265 mg/L, 48 Hours
		Water flea (Ceriodaphnia dubia)	156.6 - 298.9 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	300 mg/l, 96 hours

**Ecotoxicity** Contains a substance which causes risk of hazardous effects to the environment. 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.

**Environmental effects** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. 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.

**Aquatic toxicity** 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.

**Persistence and degradability** Not available.

### Partition coefficient

Butane	2.89
Ethylene Glycol Monobutyl Ether	0.83
Propane	2.36

## 13. Disposal Considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

**Waste from residues / unused products** 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).

**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

### TDG

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	AEROSOLS, flammable
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1

**Subsidiary risk** -  
**Packing group** Not applicable.  
**Environmental hazards** D  
**Special precautions for user** Read safety instructions, MSDS and emergency procedures before handling.

**IATA**

**UN number** UN1950  
**UN proper shipping name** Aerosols, flammable  
**Transport hazard class(es)**  
**Class** 2.1  
**Subsidiary risk** -  
**Label(s)** 2.1  
**Packing group** Not applicable.  
**Environmental hazards** No.  
**ERG Code** 10L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, MSDS 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  
**Transport hazard class(es)**  
**Class** 2.1  
**Subsidiary risk** -  
**Label(s)** None  
**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. Read safety instructions, MSDS and emergency procedures before handling.

**IATA; IMDG; TDG**



**15. Regulatory Information**

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status** Controlled

**WHMIS classification** A - Compressed Gas  
 B5 - Flammable Aerosols  
 D1A - Immediate/Serious-VERY TOXIC  
 D2B - Other Toxic Effects-TOXIC

**WHMIS labeling**





## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
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)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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

### Disclaimer

Sprayway cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

### Prepared by

Not available.

### This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Product Uses  
Composition / Information on Ingredients: Ingredients  
Physical & Chemical Properties: Multiple Properties  
Transport Information: Proper Shipping Name/Packing Group  
Regulatory Information: United States  
HazReg Data: International Inventories  
GHS: Classification