

SAFETY DATA SHEET

1. Identification

Product identifier Industrial Glass Cleaner

Other means of identification

Product code BD1496

Recommended use Glass cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Distributed by:

Company Name Class C Solutions Group
A business of MSC Industrial Supply Co.

Address 75 Maxess Road
Melville, NY 11747

Telephone 866-438-6767

24-Hour Emergency 800-424-9300 (US)

(CHEMTREC) 703-527-3887 (International)

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas

Health hazards Not classified.

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 3

Hazardous to the aquatic environment, long-term hazard Category 3

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Contains gas under pressure; may explode if heated. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Protect from sunlight. Store in a well-ventilated place.

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

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
ethanol		64-17-5	1 - 3
ammonia		7664-41-7	< 1

Chemical name	Common name and synonyms	CAS number	%
methanol		67-56-1	< 0.2

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

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or 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

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed.
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. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

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. 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. 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.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). This product is miscible in water. Prevent product from entering drains. 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.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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. 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. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, 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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known 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
ammonia (CAS 7664-41-7)	PEL	50 ppm
		35 mg/m ³
ethanol (CAS 64-17-5)	PEL	50 ppm
		1900 mg/m ³
methanol (CAS 67-56-1)	PEL	1000 ppm
		260 mg/m ³
		200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-butoxyethanol (CAS 111-76-2)	TWA	20 ppm
ammonia (CAS 7664-41-7)	STEL	35 ppm
	TWA	25 ppm
ethanol (CAS 64-17-5)	STEL	1000 ppm
methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-butoxyethanol (CAS 111-76-2)	TWA	24 mg/m ³
ammonia (CAS 7664-41-7)	STEL	5 ppm
		27 mg/m ³
		35 ppm
ethanol (CAS 64-17-5)	TWA	18 mg/m ³
		25 ppm
		1900 mg/m ³
methanol (CAS 67-56-1)	STEL	1000 ppm
		325 mg/m ³
		250 ppm
	TWA	260 mg/m ³
		200 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	*
methanol (CAS 67-56-1)	15 mg/l	Methanol	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.
 methanol (CAS 67-56-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-butoxyethanol (CAS 111-76-2) Skin designation applies.
 methanol (CAS 67-56-1) Skin designation applies.

US - Tennessee OELs: Skin designation

2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.
 methanol (CAS 67-56-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

methanol (CAS 67-56-1)	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.
methanol (CAS 67-56-1)	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. Rubber.

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.

Form Aerosol.

Color Clear.

Odor Ammoniacal.

Odor threshold Not available.

pH 10.5

Melting point/freezing point Not available.

Initial boiling point and boiling range 212 °F (100 °C) estimated

Flash point None.

Evaporation rate Slow.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.3 % estimated

Flammability limit - upper (%) 25 % estimated

Vapor pressure 280.3 hPa estimated

Vapor density > 1 (air = 1)

Relative density 0.97 estimated

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 99.6 % 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	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Aldehydes. Ketones. Organic acids.

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	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 Not known.

Components	Species	Test Results
2-butoxyethanol (CAS 111-76-2)		
Acute		
Oral		
LD50	Rat	1300 mg/kg
ammonia (CAS 7664-41-7)		
Acute		
Inhalation		
LC50	Rat	2000 ppm, 4 Hours
Oral		
LD50	Rat	350 mg/kg
ethanol (CAS 64-17-5)		
Acute		
Dermal		
LD50	Rabbit	20 g/kg
Inhalation		
LC50	Rat	8000 mg/l, 4 hours
Oral		
LD50	Rat	6.2 g/kg

* 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	Not classifiable as to carcinogenicity to humans.

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 classified.**Chronic effects** May be harmful if absorbed through skin. Prolonged inhalation may be harmful.

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** Harmful to aquatic life with long lasting effects.

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
ammonia (CAS 7664-41-7)			
Aquatic			
Fish	LC50	Chinook salmon (Oncorhynchus tshawytscha)	0.43 - 0.47 mg/l, 96 hours
ethanol (CAS 64-17-5)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	7.7 - 11.2 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
methanol (CAS 67-56-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours

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

Persistence and degradability**Bioaccumulative potential****Partition coefficient n-octanol / water (log Kow)**

2-butoxyethanol	0.81, log Pow
ethanol	-0.31
methanol	-0.77

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). Empty container can be recycled. 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. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	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.

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	All components are on the U.S. EPA TSCA Inventory List. 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.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

ethanol (CAS 64-17-5) Low priority

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 - 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)
ammonia (CAS 7664-41-7)
liquefied petroleum gas (CAS 68476-86-8)
methanol (CAS 67-56-1)

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

2-butoxyethanol (CAS 111-76-2)
ammonia (CAS 7664-41-7)
ethanol (CAS 64-17-5)
methanol (CAS 67-56-1)

US. Massachusetts RTK - Substance List

2-butoxyethanol (CAS 111-76-2)
ammonia (CAS 7664-41-7)
ethanol (CAS 64-17-5)
methanol (CAS 67-56-1)

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

2-butoxyethanol (CAS 111-76-2)
ammonia (CAS 7664-41-7)
ethanol (CAS 64-17-5)
methanol (CAS 67-56-1)

US. Rhode Island RTK

2-butoxyethanol (CAS 111-76-2)
ammonia (CAS 7664-41-7)
ethanol (CAS 64-17-5)
methanol (CAS 67-56-1)

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

methyl isobutyl ketone (CAS 108-10-1) Listed: November 4, 2011

US - California Proposition 65 - CRT: Listed date/Developmental toxin

methanol (CAS 67-56-1)

Listed: March 16, 2012

methyl isobutyl ketone (CAS 108-10-1)

Listed: March 28, 2014

Volatile organic compounds (VOC) regulations**EPA****VOC content (40 CFR 51.100(s))** 9.6 %**Consumer products (40 CFR 59, Subpt. C)** Compliant**State****Consumer products** This product is regulated as a Glass Cleaner (aerosol). This product is compliant for use in all 50 states.**VOC content (CA)** 9.6 %**VOC content (OTC)** 9.6 %**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)	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	08-01-2017
Revision date	08-01-2017
Version #	04
Further information	Control # 09968(1004702)/411A(1002393)
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 1 Flammability: 0 Instability: 0
NFPA ratings	

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 our knowledge or obtained from sources believed 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 Class C Solutions Group.

Revision Information

Product and Company Identification: Product and Company Identification
Transport Information: Agency Name, Packaging Type, and Transport Mode Selection
GHS: Classification