



SAFETY DATA SHEET

1. Identification

Product identifier	Marine Glass Cleaner	
Other means of identification		
Product code	76100	
Recommended use	Glass cleaner	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufactured or sold by:		
Company name	CRC Canada Co.	
Address	2-1246 Lorimar Dr. Mississauga, Ontario L5S 1R2 Canada	
Telephone	905-670-2291	
Website	www.crc-canada.ca	
E-mail	Support.CA@crcindustries.com	
Emergency phone number	24-Hour Emergency (CHEMTREC)	800-424-9300 (Canada) 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

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. Avoid release to the environment.
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/international regulations.
Other hazards	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
methanol		67-56-1	< 0.2

The exact percentage (concentration) of composition has been withheld as a trade secret.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

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	Rinse mouth. Get medical attention if symptoms occur.
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 (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame.
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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	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.
Methods and materials for containment and cleaning up	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. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Do not contaminate water.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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. Avoid prolonged exposure. 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. Wear appropriate personal protective equipment. 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 puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Store in a well-ventilated place. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits

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

US. ACGIH Threshold Limit Values

Components	Type	Value
methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

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

Components	Type	Value
2-butoxyethanol (CAS 111-76-2)	TWA	97 mg/m3
		20 ppm
ammonia (CAS 7664-41-7)	STEL	24 mg/m3
		35 ppm
	TWA	17 mg/m3
ethanol (CAS 64-17-5)	TWA	25 ppm
		1880 mg/m3
methanol (CAS 67-56-1)	TWA	1000 ppm
	STEL	328 mg/m3
		250 ppm
	TWA	262 mg/m3
		200 ppm

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

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

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

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

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

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

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

Components	Type	Value
2-butoxyethanol (CAS 111-76-2)	TWA	97 mg/m3
		20 ppm
ammonia (CAS 7664-41-7)	STEL	24 mg/m3
		35 ppm

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

Components	Type	Value
ethanol (CAS 64-17-5)	TWA	17 mg/m ³ 25 ppm
	TWA	1880 mg/m ³ 1000 ppm
methanol (CAS 67-56-1)	STEL	328 mg/m ³ 250 ppm
	TWA	262 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**Canada - Alberta OELs: Skin designation**

methanol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

methanol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

methanol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

methanol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

methanol (CAS 67-56-1)

Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

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.

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 appropriate chemical resistant 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

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 (Tag 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 (%)	25 % estimated
Vapor pressure	280.3 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.97 estimated
Solubility(ies)	
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	446 °F (230 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
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 classified.

Components	Species	Test Results
2-butoxyethanol (CAS 111-76-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
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
methanol (CAS 67-56-1)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Inhalation		
LC50	Rat	64000 ppm, 4 hours
Oral		
LD50	Rat	5628 mg/kg
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		
Canada - Alberta OELs: Irritant		
2-butoxyethanol (CAS 111-76-2)	Irritant	
Respiratory sensitization	This product is not expected to cause respiratory sensitization.	
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.	
ACGIH Carcinogens		
2-butoxyethanol (CAS 111-76-2)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
Canada - Manitoba OELs: carcinogenicity		
2-butoxyethanol (CAS 111-76-2)	Confirmed animal carcinogen with unknown relevance to humans.	
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 an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

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 No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-butoxyethanol	0.81, log Pow
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 Contents under pressure. Do not puncture, incinerate or crush. Empty container can be recycled. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

Local disposal regulations 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

TDG

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.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions 80

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 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 F-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Canadian regulations

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

methanol (CAS 67-56-1)

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

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

Issue date	08-02-2016
Revision date	05-11-2017
Version #	02
Further information	CRC # 411A

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

Revision Information Product and Company Identification: Product and Company Identification
Hazard(s) identification: Hazard statement
Hazard(s) identification: Supplemental label information
Composition/information on ingredients: Component information
Fire-fighting measures: Specific hazards arising from the chemical
Stability and reactivity: Conditions to avoid
Stability and reactivity: Hazardous decomposition products