

## 1. Identification

**Catalog Numbers**                    **1973, 1973M**

**Product identifier**                **CRL GLASS CLEANER**

**Company information**            C.R. LAURENCE CO., INC.  
2503 E. VERNON AVENUE  
LOS ANGELES, CA 90058 United States

**Company phone**                    General Assistance 800-421-6144

**Emergency telephone**            **Chemtrec: 1-800-424-9300 (24 hours)**

**Version #**                                01

**Recommended use**                  Cleaner

**Recommended restrictions**        None known.

## 2. Hazard(s) identification

**Physical hazards**                    Flammable aerosols                    Category 1

**Health hazards**                    Acute toxicity, oral                    Category 4  
Acute toxicity, dermal                Category 3  
Serious eye damage/eye irritation    Category 2  
Specific target organ toxicity, single exposure    Category 3 respiratory tract irritation

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

**OSHA defined hazards**            Not classified.

**Label elements**



**Signal word**                            Danger

**Hazard statement**                 Extremely flammable aerosol. Causes serious eye irritation.

**Precautionary statement**

**Prevention**                            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. Wash thoroughly after handling. Wear eye/face protection.

**Response**                             If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Storage**                                Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

**Disposal**                                Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)**        None known.

**Supplemental information**        None.

## 3. Composition/information on ingredients

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
Butane		106-97-8	1 - 2.5
Isopropyl Alcohol		67-63-0	1 - 2.5

Chemical name	Common name and synonyms	CAS number	%
Propane		74-98-6	1 - 2.5
Other components below reportable levels			90 - 100

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	In the unlikely event of swallowing contact a physician or poison control center.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of eyes and mucous membranes.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
<b>Special 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. Use water spray to cool unopened containers. 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 other involved materials. Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
<b>General fire hazards</b>	Extremely flammable aerosol.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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. 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.
<b>Methods and materials for containment and cleaning up</b>	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. 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. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	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. Ground and bond containers when transferring material. Do not re-use empty containers. Do not get this material in contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Observe good industrial hygiene practices. Wash hands thoroughly after handling.
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**Conditions for safe storage, including any incompatibilities**

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). Level 1 Aerosol (NFPA 30B)

**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 <sub>3</sub>
Isopropyl Alcohol (CAS 67-63-0)	PEL	50 ppm
		980 mg/m <sub>3</sub>
Propane (CAS 74-98-6)	PEL	400 ppm
		1800 mg/m <sub>3</sub>
		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
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm
		200 ppm

**US. NIOSH: Pocket Guide to Chemical**

Hazards Component	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>
Isopropyl Alcohol (CAS 67-63-0)	STEL	800 ppm
		1225 mg/m <sup>3</sup>
Propane (CAS 74-98-6)	TWA	500 ppm
		980 mg/m <sup>3</sup>
		400 ppm
	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	*
Isopropyl Alcohol (CAS 67-63-0)	40 mg/l	Acetone	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. Provide eyewash station.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear eye/face protection. Wear safety glasses with side shields (or goggles).

**Hand protection** Wear protective gloves.

**Skin protection**

**Other** Wear appropriate chemical resistant 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.

**9. Physical and chemical properties**
**Appearance**

**Physical state** Liquid.

**Form** Aerosol.

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

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

**Flash point** 39.9°F (4.4°C) estimated

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** 21.89 psig @70F estimated

**Vapor density** Not available.

**Relative density** 0.977 g/cm<sup>3</sup> estimated

**Solubility(ies)**

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** 446°F (230°C) estimated

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Density** 0.98 g/cm<sup>3</sup> estimated

**Flammability class** Flammable IB estimated

<b>Heat of combustion</b>	3.4 kJ/g estimated
<b>Heat of combustion (NFPA 30B)</b>	3.4 kJ/g estimated
<b>Percent volatile</b>	99.9 % estimated
<b>Specific gravity</b>	0.977 estimated
<b>VOC (Weight %)</b>	9.95 % estimated

## 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.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	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** Causes serious eye irritation.

**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>		
<i>Dermal</i>		
LD50	Guinea pig	230 ml/kg, 24 Hours
	Rabbit	7.3 ml/kg, 4 Days
		450 ml/kg, 24 Hours
		435 mg/kg, 24 Hours
		0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
<i>Oral</i>		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1200 mg/kg
	Rat	530 - 2800 mg/kg
Butane (CAS 106-97-8)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes

Components	Species	Test Results
Isopropyl Alcohol (CAS 67-63-0)		52 %, 120 Minutes
	Rat	1355 mg/l
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	16.4 ml/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 10000 ppm, 6 Hours
<i>Oral</i>		
LD50	Rat	5.84 g/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

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

<b>Skin corrosion/irritation</b>	Not applicable.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
2-Butoxyethanol (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not listed.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not likely, due to the form of the product.
<b>Chronic effects</b>	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

**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 (Menidia beryllina)	1250 mg/l, 96 hours

Components	Species	Test Results
Isopropyl Alcohol (CAS 67-63-0)		
<b>Aquatic</b>		
Algae	IC50	Algae 1000.0001 mg/L, 72 Hours
Crustacea	EC50	Daphnia 13299 mg/L, 48 Hours
Fish	LC50	Bluegill (Lepomis macrochirus) > 1400 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	0.83
Butane	2.89
Isopropyl Alcohol	0.05
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.

### 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. This material and its container must be disposed of as hazardous waste. 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.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**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

**DOT**

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, flammable
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	None
<b>Packing group</b>	Not applicable.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	N82
<b>Packaging exceptions</b>	306
<b>Packaging non bulk</b>	None
<b>Packaging bulk</b>	None

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 and both may be displayed concurrently.

**IATA**

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

**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, SDS and emergency procedures before handling.

**Other information**

**Passenger and cargo aircraft** Allowed.  
**Cargo aircraft only** Allowed.  
**Packaging Exceptions** LTD QTY

**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, SDS and emergency procedures before handling.

**Packaging Exceptions** LTD QTY

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

**DOT**



**IATA; IMDG**



**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 listed.

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

**Hazard categories**  
 Immediate Hazard - Yes  
 Delayed Hazard - No  
 Fire Hazard - Yes  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Anhydrous Ammonia	7664-41-7	100	500 lbs		

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
 Not regulated.

**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 (SDWA)** Not regulated.

**US state regulations**
**US. Massachusetts RTK - Substance List**

2-Butoxyethanol (CAS 111-76-2)  
 Butane (CAS 106-97-8)  
 Isopropyl Alcohol (CAS 67-63-0)  
 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)  
 Isopropyl Alcohol (CAS 67-63-0)  
 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)  
 Isopropyl Alcohol (CAS 67-63-0)  
 Propane (CAS 74-98-6)

**US. Rhode Island RTK**

Butane (CAS 106-97-8)  
 Isopropyl Alcohol (CAS 67-63-0)  
 Propane (CAS 74-98-6)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**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

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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).

### 16. Other information, including date of preparation or last revision

**Issue date** 09-15-2015

**Version #** 01

**Disclaimer** 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.