

SAFETY DATA SHEET

crlaurence.com

1. Identification

Product number 1000000970 **CRL Catalog Number** 3371100

Product identifier CRL HI-SHEEN GLASS CLEANER

08-24-2018 Revision date

C R LAURENCE CO INC Company information 2503 E. VERNON AVENUE

LOS ANGELES, CA 90058 United States

General Assistance 800-421-6144 Company phone

Emergency telephone US 1-866-836-8855 Emergency telephone outside 1-952-852-4646

Version # 04

08-22-2018 Supersedes date Recommended use Cleaner Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Flammable aerosols Category 1

Health hazards Not classified. **OSHA** defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol.

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.

Response Wash hands after handling.

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

Disposal Not available. None known.

Hazard(s) not otherwise classified (HNOC)

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
Ethyl Alcohol		64-17-5	1 - 2.5
Ammonium Hydroxide		1336-21-6	0.1 - 1
Propane		74-98-6	0.1 - 1

Product #: 1000000970 Version #: 04 Revision date: 08-24-2018 Issue date: 09-15-2015



4. First-aid measures

Inhalation

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, Call a physician if symptoms develop or persist.

Skin contact

Take off immediately all contaminated clothing. Call a physician or Poison Control Center immediately. Get medical attention if irritation develops and persists.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Call a physician or Poison Control Center immediately.

Ingestion

In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center.

Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed

Treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

In case of shortness of breath, give oxygen. Immediate medical attention is required. 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. Keep victim under observation. Keep victim warm.

5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2), 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 explode 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. Structural firefighters protective clothing will only provide limited protection.

Fire fighting equipment/instructions 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.

Specific methods

Use standard firefighting procedures and consider the hazards of 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.

General fire hazards

Extremely flammable aerosol.

6. Accidental release measures

Personal precautions. protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. 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 Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Move the cylinder to a safe and open area if the leak is irreparable. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewer, basements or confined areas. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: 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. This material and its container must be disposed of as hazardous waste.

Environmental precautions

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



7. Handling and storage

Precautions for safe handling

May be ignited by open flame. 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. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Keep locked up. 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 in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

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8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Туре	Value	
PEL	240 mg/m3	
	50 ppm	
PEL	1900 mg/m3	
	1000 ppm	
PEL	1800 mg/m3	
	1000 ppm	
Туре	Value	
TWA	20 ppm	
STEL	1000 ppm	
STEL	1000 ppm	
azards		
Туре	Value	
TWA	24 mg/m3	
	5 ppm	
TWA	1900 mg/m3	
TWA		
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TWA	• • • • • • • • • • • • • • • • • • • •	
	- J	
	PEL PEL Type TWA STEL STEL azards Type TWA TWA	PEL 240 mg/m3 50 ppm PEL 1900 mg/m3 1000 ppm PEL 1800 mg/m3 1000 ppm Type Value TWA 20 ppm STEL 1000 ppm STEL 1000 ppm STEL 1000 ppm Type Value TWA 24 mg/m3 5 ppm TWA 1900 mg/m3 800 ppm TWA 1900 mg/m3 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)

US - Minnesota Haz Subs: Skin designation applies

Can be absorbed through the skin.

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

Not available.

controls

Individual protection measures, such as personal protective equipment

Eye/face protection Wear tight-fitting goggles or face shield. 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

Do not get in eyes. Do not get this material in contact with skin. When using do not smoke, Avoid contact with skin. 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. Not available.

Melting point/freezing point Initial boiling point and boiling

Not available. 212 °F (100 °C) estimated

range

pΗ

Flash point -156.0 °F (-104.4 °C) Propellant estimated

Evaporation rate Not available. Flammability (solid, gas) Not applicable. 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 40 - 50 @20C

Vapor density Not available. Relative density Not available.

Solubility(ies)

Solubility (water) Not available. Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperature Not available. **Decomposition temperature** Not available. Viscosity Not available.



Other information

Explosive properties

Not explosive.

Flammability class

Flammable IB estimated

2.53 kJ/g estimated

Heat of combustion (NFPA

30B)

Oxidizing properties

Not oxidizing.

Specific gravity

0.971 estimated

VOC (Weight %)

7.73 % estimated

10. Stability and reactivity

Reactivity

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

Chemical stability

Risk of ignition.

Possibility of hazardous

Hazardous polymerization does not occur.

reactions

Conditions to avoid

Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials

Strong oxidizing agents. Do not mix with other chemicals.

Hazardous decomposition

No hazardous decomposition products are known.

products

11. Toxicological information

Information on 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

Product	Species	Test Results
CRL HI-SHEEN GLASS CL	EANER	
<u>Acute</u>		
Dermal		
LD50	Rat	8100 mg/kg
Inhalation		
LC50	Rat	68 mg/l/4h
Components	Species	Test Results
2-Butoxyethanol (CAS 111-	76-2)	
<u>Acute</u>		
Dermal		
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
		0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
Inhalation		<u> </u>
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
		• • •



Components	ents Species Test Results		
Oral			
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)			
<u>Acute</u>			
Inhalation			
LC50	Mouse	1237 mg/l, 120 M inutes	
		52 %, 120 Minutes	
	Rat	1355 mg/l	
Ethyl Alcohol (CAS 64-17-5)			
<u>Acute</u>			
inhalation LC50	Cat	05 44 mm/l 4 5 Hz	
2000	Cat	85.41 mg/l, 4.5 Hours	
	Mouse	43.68 mg/l, 6 Hours	
	Mouse	> 60000 ppm	
	Det	79.43 mg/l, 134 Minutes	
	Rat	> 115.9 mg/l, 4 Hours	
01		51.3 mg/l, 6 Hours	
Oral LD50	Monkey	0000 #	
2000	Mouse	6000 mg/kg	
		10500 ml/kg	
	Pig	> 5000 mg/kg	
•	Rat	10470 mg/kg	
Department (CAC 74.00.0)		7800 ml/kg	
Propane (CAS 74-98-6) Acute			
Inhalation			
LC50	Mouse	1237 mg/l, 120 Minutes	
		52 %, 120 Minutes	
	Rat	1355 mg/l	
	· tat	658 mg/l/4h	
		ooo mg/⊭#	

^{*} 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

Harmful in contact with eyes.

Respiratory or skin sensitization

Respiratory sensitization

Not a respiratory sensitizer.

Skin sensitization Germ cell mutagenicity Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity

Hazardous by OSHA criteria. Hazardous by WHMIS criteria. Cancer hazard.

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

Hazardous by OSHA criteria. Can cause adverse reproductive effects - such as birth defects,

miscarriages, or infertility.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard

Not an aspiration hazard.

Chronic effects

Hazardous by WHMIS criteria. 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 or repeated exposure may cause lung injury.

Further information

Reproductive toxicity.

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.

Product		Species	Test Results
CRL HI-SHEEN GLAS	S CLEANER		
Aquatic			
Crustacea	EC50	Daphnia	16068 mg/L, 48 Hours
Fish	LC50	Fish	928 mg/L, 96 Hours
Components		Species	Test Results
2-Butoxyethanol (CAS	111-76-2)		
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Ammonium Hydroxide	(CAS 1336-21-6)		
Aquatic			
Crustacea	EC50	Daphnia	0.66 mg/L, 48 Hours
Fish	LC50	Western mosquitofish (Gambusia affinis	s) 15 mg/l, 96 hours
Ethyl Alcohol (CAS 64	-17-5)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	7700 - 11200 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas	s) > 100.1 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

No data available.

Partition coefficient n-octanol / water (log Kow)

 2-Butoxyethanol
 0.83

 Butane
 2.89

 Ethyl Alcohol
 -0.31

 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. 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).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal. Do not re-use empty containers.

14. Transport information

DOT

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.

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

Special provisions Packaging exceptions 306 Packaging non bulk None Packaging bulk 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.

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**

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 with restrictions.

Cargo aircraft only

Allowed with restrictions,

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** F-D, S-U

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

instructions, SDS and emergency procedures before handling.

Packaging Exceptions

Transport in bulk according to Annex II of MARPOL 73/78 and LTD OTY Not applicable.

the IBC Code



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.

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

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonium Hydroxide (CAS 1336-21-6)

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

No

chemical

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
2-Butoxyethanol	111-76-2	2.5 - 10	

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)

Ammonium Hydroxide (CAS 1336-21-6)

Butane (CAS 106-97-8) Ethyl Alcohol (CAS 64-17-5) Propane (CAS 74-98-6)

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

2-Butoxyethanol (CAS 111-76-2)

Ammonium Hydroxide (CAS 1336-21-6)

Butane (CAS 106-97-8) Ethyl Alcohol (CAS 64-17-5) Propane (CAS 74-98-6)

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

2-Butoxyethanol (CAS 111-76-2)

Ammonium Hydroxide (CAS 1336-21-6)

Butane (CAS 106-97-8)

Ethyl Alcohol (CAS 64-17-5)

Propane (CAS 74-98-6)

US. Rhode Island RTK

Ammonium Hydroxide (CAS 1336-21-6)

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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)	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, including date of preparation or last revision

 Issue date
 09-15-2015

 Revision date
 08-24-2018

Version # 04

Disclaimer 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.



Revision information

Hazard(s) identification: Hazard statement Hazard(s) identification: Prevention Hazard(s) identification: Response Hazard(s) identification: Storage Physical & Chemical Properties: Multiple Properties