SAFETY DATA SHEET According to Safe Work Australia AUGUST 2020

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product Name: CRL HI-SHEEN Glass Cleaner
Recommended use: Cleaner
Recommended restrictions: None known

Issued: 08/10/20

CRL Product Cat. No.: **3371100**

Supplier: C.R. Laurence Pty Ltd
9 Shale Place
Eastern Creek NSW 2766

Email: crlaus@crlaurence.com
Phone Number: 02 9851 3444

Emergency Telephone Number: National Poison Information Centre: 13 11 26

2. HAZARDS 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.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS Number	CAS Number	%
2-Butoxyethanol	67-63-0	111-76-2	2.5-10
Butane	108-65-6	106-97-8	1-2.5
Ethyl Alcohol	115-10-6	64-17-5	1-2.5
Ammonium Hydroxide	78-93-3	1336-21-6	0.1-1
Propane	1330-20-7	74-98-6	0.1-1
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

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

Skin 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.

Eye contact

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.

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 Most important 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	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing	Do not use water jet as an extinguisher, as this will spread the fire. media Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Specific hazards arising from the chemical	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.
Special protective equipment and precautions for firefighters	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.
Fire fighting equipment/instructions	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.
Specific methods	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).

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/m3
		50 ppm
Ethyl Alcohol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3
	1	000 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
Ethyl Alcohol (CAS 64-17-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3
		5 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Ethyl Alcohol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONT.)

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)	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	Not available.

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.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C) estimated
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 (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Heat of combustion (NFPA 30B)	2.53 kJ/g estimated
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 reactions	Hazardous polymerization does not occur.
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 products	No hazardous decomposition products are known.

11. STABILITY AND REACTIVITY

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.

11. STABILITY AND REACTIVITY (CONT.)

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 CLEANER		
Acute		
Dermal		
LD50	Rat	8100 mg/kg
Inhalation		
LC50	Rat	68 mg/l/4h

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Acute		
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		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours

Components	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)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l
Ethyl Alcohol (CAS 64-17-5)		
Acute		
Inhalation		
LC50	Cat	85.41 mg/l, 4.5 Hours 43.68 mg/l, 6 Hours
	Mouse	> 60000 ppm 79.43 mg/l, 134 Minutes
	Rat	> 115.9 mg/l, 4 Hours 51.3 mg/l, 6 Hours
Oral		
LD50	Monkey	6000 mg/kg
	Mouse	10500 ml/kg
	Pig	> 5000 mg/kg
	Rat 1	0470 mg/kg 7800 ml/kg
Propane (CAS 74-98-6)		

11. STABILITY AND REACTIVITY (CONT.)

Acute

Inhalation

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.

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 Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0 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 GLASS CLEANER			
Aquatic			
Crustacea	EC50	Daphnia	16068 mg/L, 48 Hours
Fish	LC50	Fish	928 mg/L, 96 Hours

12. ECOLOGICAL INFORMATION (CONT.)

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)	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) > 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 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).

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. 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	N82
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	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 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	LTD QTY
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

14. TRANSPORT INFORMATION (CONT.)

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 chemical No

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)

15. REGULATORY INFORMATION (CONT.)

Safe Drinking Water Act (SDWA) **Not regulated.**

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 governingcountry(s).

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date	08-10-2020
Revision date	08-08-2020
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.