

SAFETY DATA SHEET

1. Identification

Product number RA001
 Product identifier KSS CLASSY GLASS
 Revision date 06-06-2014
 Company information KSS ENTERPRISES
 KALAMAZOO, MI 49001 UNITED STATES
 Company phone 1-800-638-4191
 Emergency telephone US 1-866-836-8855
 Emergency telephone outside US 1-952-852-4646
 Version # 14
 Supersedes date 05-19-2014
 Recommended use Glass Cleaner
 Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas
 Health hazards Not classified.
 OSHA defined hazards Not classified.

Label elements



Signal word Warning
 Hazard statement Contains gas under pressure; may explode if heated.
 Prevention Observe good industrial hygiene practices.
 Response Wash hands after handling.
 Storage Protect from sunlight. Store in a well-ventilated place.
 Disposal Dispose of waste and residues in accordance with local authority requirements.
 Hazard(s) not otherwise classified (HNOC) Not classified.
 Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Hazardous components Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
Ethyl Alcohol		64-17-5	2.5 - 10
Butane		106-97-8	1 - 2.5
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

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 In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
 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 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.
 Fire-fighting equipment/instructions In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. 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 Move container from fire area if it can be done without risk.

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. 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. See Section 8 of the MSDS for Personal Protective Equipment. For personal protection, see section 8 of the MSDS.
 Methods and materials for containment and cleaning up 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. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the MSDS.
 Environmental precautions 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. Do not re-use empty containers. Do not get this material in contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Observe good industrial hygiene practices.
 Conditions for safe storage, including any incompatibilities Level 1 Aerosol.
 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. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). 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/m3
Ethyl Alcohol (CAS 64-17-5)	PEL	50 ppm 1900 mg/m3
Propane (CAS 74-98-6)	PEL	1000 ppm 1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 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/m ³
		5 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m ³ 800 ppm
Ethyl Alcohol (CAS 64-17-5)	TWA	1900 mg/m ³ 1000 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m ³ 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) 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.

Individual protection measures, such as personal protective equipment

- Eye/face protection Wear safety glasses with side shields (or goggles).
- Hand protection Wear protective gloves.
- Other Wear appropriate chemical resistant clothing.
- Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. 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 Clear.
- Color Colorless. Pale yellow
- Form Aerosol. Liquefied gas.
- Physical state Gas.
- Flash point -156.00 °F (-104.44 °C) Propellant estimated
- Melting point/freezing point Not available.
- Odor Butyl
- pH 9.5 - 10.5 estimated

Solubility(ies) Not available.
 Vapor density Not available.
 Vapor pressure 80 - 100 psig @70F estimated
 Viscosity Not available.

Other information

Aerosol spray enclosed space
 Deflagration density > 2.52 g/cm3 Tested
 Aerosol spray ignition distance < 15 cm Tested estimated
 Specific gravity 0.97 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. Hazardous polymerization does not occur.
 Conditions to avoid Avoid temperatures exceeding the flash point. Contact with incompatible materials. Fire or intense heat may cause violent rupture of packages.
 Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion Expected to be a low ingestion hazard.
 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 No adverse effects due to skin contact are expected.
 Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

Acute toxicity Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Product	Species	Test Results
Gleme Glass Cleaner (CAS Mixture)		
Acute Dermal LD50	Rabbit	7674.2803 mg/kg, estimated
Inhalation LC50	Mouse	41337.3867 mg/l, 2 Hours, estimated 24423.8574 mg/l, 7 Hours, estimated 1157.1971 mg/l, 4 Hours, estimated
	Rat	77781.5078 mg/l, 15 Minutes, estimated 15701.0518 mg/l, 4 Hours, estimated 75.2338 mg/l/4h, estimated
Oral LD50	Dog	163.1945 g/kg, estimated
	Guinea pig	33.4032 g/kg, estimated
	Mouse	41.8347 g/kg, estimated
	Rabbit	11.1629 g/kg, estimated
	Rat	16398.877 mg/kg, estimated
Other LD50	Mouse	16186.6035 mg/kg, estimated

Product	Species	Test Results
	Rabbit	9769.543 mg/kg, estimated
	Rat	9276.1592 mg/kg, estimated
Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Acute		
Dermal		
LD50	Rabbit	220 mg/kg
Inhalation		
LC50	Mouse	700 mg/l, 7 Hours
	Rat	450 mg/l, 4 Hours
		2.21 mg/l/4h
Oral		
LD50	Guinea pig	1.2 g/kg
	Mouse	1.2 g/kg
	Rabbit	0.32 g/kg
	Rat	470 mg/kg
Other		
LD50	Mouse	1130 mg/kg
	Rabbit	280 mg/kg
	Rat	340 mg/kg
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Ethyl Alcohol (CAS 64-17-5)		
Acute		
Inhalation		
LC50	Mouse	39 mg/l, 4 Hours
	Rat	20000 mg/l, 10 Hours
Oral		
LD50	Dog	5.5 g/kg
	Guinea pig	5.6 g/kg
	Mouse	3450 mg/kg
	Rat	6.2 g/kg
Other		
LD50	Mouse	933 mg/kg
	Rat	1440 mg/kg
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	> 1442.847 mg/l, 15 Minutes
		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	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	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

	2-Butoxyethanol (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	Possible reproductive hazard. 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. Not likely, due to the form of the product.	
Chronic effects	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 Harmful to aquatic life with long lasting effects.

Product	Species	Test Results
Gleme Glass Cleaner (CAS Mixture)		
Crustacea	EC50	Daphnia
		53463.5547 mg/L, 48 Hours, estimated
Fish	LC50	Fish
		42460.2109 mg/L, 96 Hours, estimated
Components		
2-Butoxyethanol (CAS 111-76-2)		
Crustacea	EC50	Daphnia
		1819 mg/L, 48 Hours
Aquatic		
Fish	LC50	Inland silverside (Menidia beryllina)
		1250 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)

Ethyl Alcohol	-0.31
2-Butoxyethanol	0.83
Propane	2.36
Butane	2.89

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 Consult authorities before disposal. 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 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.

14. Transport information

DOT

UN number UN1950

UN proper shipping name	Aerosols
Transport hazard class(es)	2.2
Subsidiary class(es)	Not available.
Packing group	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Labels required	None
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 and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable
Transport hazard class(es)	2.2
Subsidiary class(es)	-
Packaging group	Not available.
Environmental hazards	No
Labels required	2.2
ERG Code	2L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY

IMDG

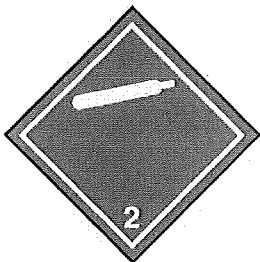
UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	2.2
Subsidiary class(es)	-
Packaging group	Not available.
Environmental hazards	
Marine pollutant	No
Labels required	None
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures 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.
 US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
 Not listed.
 SARA 304 Emergency release notification
 Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - Yes Reactivity Hazard - No
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SARA 302 Extremely hazardous substance	No
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SARA 311/312 Hazardous chemical	No
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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.
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Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
 Not listed.

Food and Drug Administration (FDA)	Not regulated.
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US state regulations

US. New Jersey Worker and Community Right-to-Know Act
 Butane (CAS 106-97-8) 500 lbs
 Propane (CAS 74-98-6) 500 lbs

US. Pennsylvania RTK - Hazardous Substances
 2-Butoxyethanol (CAS 111-76-2)
 Butane (CAS 106-97-8)
 Ethyl Alcohol (CAS 64-17-5)
 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 this product complies 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	07-12-2013
Revision date	06-06-2014
Version #	14
Further information	Not available.
References	EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents
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.

