

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **AUTO GLASS CLEANER**

Product Code(s) : GC1, GC1C

Recommended use of the chemical and restrictions on use

: Automotive - Glass Cleaner.
Restrictions on use: Not available.

Chemical family : Mixture of: Alcohol; Glycol ether solvent; Propellant

Name, address, and telephone number of the supplier:

Radiator Specialty Co., of Canada

3-3055 Dundas St West, Suite 50
Mississauga, ON, Canada
L5L 3R8

Supplier's Telephone # : (905) 625-9117 (Mon. - Fri., 8 am - 4 pm)

24 Hr. Emergency Tel # : Not available.

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear liquid, contained in a pressurized aerosol can.

Most important hazards:

Contents under pressure. Container may explode if heated.

Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Avoid release to the environment. See Section 12 for more environmental information.

This product is packaged and sold as a consumer product. The Hazardous Products Act (HPA) does not apply to consumer products [Hazardous Products Act Section 12(j)]. The below WHMIS 2015 classification and labeling information is being provided for informational purposes.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Classification:

Gases under pressure - Liquefied gas

Label elements

Hazard pictogram(s)



Signal Word

WARNING!

Hazard statement(s)

Contains gas under pressure; may explode if heated.

Precautionary statement(s)

Protect from sunlight. Store in a well-ventilated place.

Other hazards

Other hazards which do not result in classification:

Toxic fumes may be released during a fire. May be slightly irritating to eyes, skin and other contaminated tissue. Mild respiratory irritant. In extremely high concentrations, may cause symptoms of central nervous system depression. May cause gastrointestinal irritation. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Isopropyl alcohol	Isopropanol 2-Propanol	67-63-0	1.0 - 5.0
Diethylene glycol monobutyl ether	2-(2-Butoxyethoxy)ethanol DEGBE	112-34-5	1.0 - 5.0
Propane	Dimethylmethane Propyl hydride	74-98-6	1.0 - 5.0
Butane	n-Butane Butyl hydride Methylethylethane	106-97-8	1.0 - 5.0

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. If irritation or symptoms develop, seek medical attention.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stops, provide artificial respiration. If irritation or symptoms develop, seek medical attention.
- Skin contact* : In case of contact with skin, wash with mild soap and plenty of water. If irritation or symptoms develop, seek medical attention. Launder clothing before reuse.
- Eye contact* : Rinse thoroughly with plenty of water, also under the eyelids. If irritation or symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed

- : May be slightly irritating to eyes, skin and other contaminated tissue. Direct skin contact may cause temporary redness. Direct eye contact may cause slight redness. Mild respiratory irritant. May cause coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically. 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.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Carbon dioxide (CO₂); Dry chemical; Alcohol resistant foam; Water fog
- Unsuitable extinguishing media* : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Not considered flammable. This product is contained under pressure, and could explode when exposed to heat and flame. Toxic fumes, gases or vapours may evolve on burning.

Hazardous combustion products

- : Carbon oxides; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

- Protective equipment for fire-fighters* : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

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Special fire-fighting procedures

- : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Shield personnel to protect from venting or rupturing containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent product from entering drains, sewers, waterways and soil.

Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities. . Refer to Section 13 for disposal of contaminated material.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use with adequate ventilation. Wear suitable protective equipment during handling. Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Do not pierce or burn, even after use. Keep away from incompatibles. Always replace cap after use. Wash thoroughly after handling.

Conditions for safe storage : Store in cool/well-ventilated place. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F. Keep away from incompatibles.

Incompatible materials : Strong oxidizing agents; Strong acids; Strong bases

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>				
<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Isopropyl alcohol	200 ppm	400 ppm	400 ppm (980 mg/m ³)	N/Av
Diethylene glycol monobutyl ether	10 ppm (inhalable) (vapour)	N/Av	N/Av	N/Av
Propane	N/Av	N/Av	1000 ppm (1800 mg/m ³)	N/Av
Butane	1000 ppm (Butane, all isomers)	N/Av	800 ppm (final rule limit)	N/Av

Exposure controls

Ventilation and engineering measures

- : Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

- : If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Refer to CSA Z94.3 or other appropriate standards. Advice should be sought from respiratory protection specialists.

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- Skin protection** : Gloves impervious to the material are recommended. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear sufficient clothing to prevent skin contact.
- Eye / face protection** : Wear as appropriate: Tightly fitting safety goggles; Safety glasses with side shields.
- Other protective equipment** : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.
- General hygiene considerations** : Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Clear liquid, contained in a pressurized aerosol can.
- Odour** : N/Av
- Odour threshold** : N/Av
- pH** : N/Av
- Melting/Freezing point** : N/Av
- Initial boiling point and boiling range** : N/Av
- Flash point** : N/Av
- Flashpoint (Method)** : N/Av
- Evaporation rate (BuAe = 1)** : N/Av
- Flammability (solid, gas)** : Not applicable.
- Lower flammable limit (% by vol.)** : N/Av
- Upper flammable limit (% by vol.)** : N/Av
- Oxidizing properties** : No oxidizing properties.
- Explosive properties** : Aerosols are sensitive to mechanical impact. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time.
- Vapour pressure** : N/Av
- Vapour density** : N/Av
- Relative density / Specific gravity** : Relative density: N/Av
Specific Gravity: N/Av
- Solubility in water** : N/Av
- Other solubility(ies)** : N/Av
- Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** : N/Av
- Auto-ignition temperature** : N/Av
- Decomposition temperature** : N/Av
- Viscosity** : N/Av
- Volatiles (% by weight)** : N/Av
- Volatile organic Compounds (VOC's)** : N/Av
- Absolute pressure of container** : N/Av
- Flame projection length** : None.
- Other physical/chemical comments** : Flashback Observed: NO
Heat of combustion: 3.43 kJ/g

SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : Not normally reactive.
- Chemical stability** : Stable under normal conditions.
- Possibility of hazardous reactions** : Hazardous polymerization does not occur.

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- Conditions to avoid** : Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.
- Incompatible materials** : Strong oxidizing agents; Strong acids; Strong bases
- Hazardous decomposition products**
: Not available.
Refer also to hazardous combustion products, Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation** : YES
- Routes of entry skin & eye** : YES
- Routes of entry Ingestion** : YES
- Routes of exposure skin absorption**
: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : Mild respiratory irritant. May cause coughing and breathing difficulties. If higher concentrations are inhaled, additional symptoms may include headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. In extremely high concentrations, product may act as an asphyxiant and cause increased breathing and pulse rates, fatigue and unconsciousness.

Sign and symptoms ingestion

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

- : May cause mild skin irritation. Direct skin contact may cause temporary redness. May be absorbed through the skin. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.

Sign and symptoms eyes

- : Direct eye contact may cause slight or mild, transient irritation. Direct eye contact may cause slight redness.

Potential Chronic Health Effects

- : Prolonged or repeated skin contact may cause drying and irritation. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

Mutagenicity

- : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

- : Not classifiable as a human carcinogen. No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

- : This product is not expected to cause reproductive or developmental effects.

Sensitization to material

- : No data available to indicate product or components may be skin sensitizers.
No data available to indicate product or components may be respiratory sensitizers.

Specific target organ effects

- : According to the classification criteria of Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause specific target organ toxicity (STOT) through single or repeated exposures.

Medical conditions aggravated by overexposure

- : Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials

- : None known or reported by the manufacturer.

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Toxicological data : Not classified for acute toxicity based on available data. No data is available on the product itself. The calculated ATE values for this mixture are:
 ATE oral = > 94,400 mg/kg
 ATE dermal = > 40,000 mg/kg
 ATE inhalation (vapours) = > 217.5 mg/L/4H
 See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	LC₅₀ (4hr) <u>inh, rat</u>	LD₅₀	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Isopropyl alcohol	17 000 ppm (41.8 mg/L) (vapour)	4720 mg/kg	12 890 mg/kg
Diethylene glycol monobutyl ether	N/Av	6560 mg/kg	2764 mg/kg
Propane	N/Av	N/Ap (gas)	N/Ap (gas)
Butane	276 000 ppm	N/Ap (gas)	N/Ap (gas)

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Isopropyl alcohol	67-63-0	9640 mg/L (Fathead minnow)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	1300 mg/L (Bluegill sunfish)	N/Av	None.
Propane	74-98-6	N/Ap	N/Ap	N/Ap
Butane	106-97-8	N/Ap	N/Ap	N/Ap

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Isopropyl alcohol	67-63-0	> 10 000 mg/L/24hr (Daphnia magna)	30 mg/L	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L (Daphnia magna)	N/Av	None.
Propane	74-98-6	N/Ap	N/Ap	N/Ap
Butane	106-97-8	N/Ap	N/Ap	N/Ap

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Isopropyl alcohol	67-63-0	N/Av	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L/96hr (Green algae)	≥ 100 mg/L/96hr	None.
Propane	74-98-6	N/Ap	N/Ap	N/Ap
Butane	106-97-8	N/Ap	N/Ap	N/Ap

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Persistence and degradability

: The product itself has not been tested.
 The following ingredients are considered to be readily biodegradable: Isopropyl alcohol; Diethylene glycol monobutyl ether.

Bioaccumulation potential

: The product itself has not been tested. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Isopropyl alcohol (CAS 67-63-0)	0.05	1.0
Diethylene glycol monobutyl ether (CAS 112-34-5)	1.0	3.0
Butane (CAS 106-97-8)	2.89 (estimated)	33 (estimated)

Mobility in soil

: The product itself has not been tested.

Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS


Handling for Disposal

: Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.
 This material and its container must be disposed of in a safe way. Empty containers retain residue and can be dangerous. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Methods of Disposal

: Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	UN1950	AEROSOLS	2.2	None	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDG, refer to Section 1.17 for additional exemption requirements, if shipping under this exemption.				

Special precautions for user

: Appropriate advice on safety must accompany the package. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.

Environmental hazards

: This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product contains the following substances listed on the NPRI:

- Isopropyl alcohol (Part 1, Group A Substance; Part 5: Individual Substances)
- Diethylene glycol monobutyl ether (Part 5: Other groups and mixtures)
- Propane (Part 5: Individual Substances)

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

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US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	<u>CAS #</u>	<u>European EINECS</u>	<u>Australia AICS</u>	<u>Philippines PICCS</u>	<u>Japan ENCS</u>	<u>Korea KECI/KECL</u>	<u>China IECSC</u>	<u>New Zealand IOC</u>
Isopropyl alcohol	67-63-0	200-661-7	Present	Present	(2)-207	KE-29363	Present	HSR001180
Diethylene glycol monobutyl ether	112-34-5	203-961-6	Present	Present	(7)-97; (2)-422	KE-10466	Present	HSR001075
Propane	74-98-6	200-827-9	Present	Present	(2)-3	KE-29258	Present	HSR001010
Butane	106-97-8	203-448-7	Present	Present	(2)-4	KE-03751	Present	HSR000989

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- AICS: Australian Inventory of Chemical Substances
- CAS: Chemical Abstract Services
- CSA: Canadian Standards Association
- EC50: Effective Concentration 50%
- EINECS: European Inventory of Existing Commercial chemical Substances
- ENCS: Existing and New Chemical Substances
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- IBC: Intermediate Bulk Container
- IECSC: Inventory of Existing Chemical Substances
- IMDG: International Maritime Dangerous Goods
- IOC: Inventory of Chemicals
- KECI: Korean Existing Chemicals Inventory
- KECL: Korean Existing Chemicals List
- LC: Lethal Concentration
- LD: Lethal Dose
- N/Ap: Not Applicable
- N/Av: Not Available
- NIOSH: National Institute of Occupational Safety and Health
- NOEC: No observable effect concentration
- NTP: National Toxicology Program
- OECD: Organisation for Economic Co-operation and Development
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure limit
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- RTECS: Registry of Toxic Effects of Chemical Substances
- SDS: Safety Data Sheet
- STEL: Short Term Exposure Limit
- TDG: Canadian Transportation of Dangerous Goods Act & Regulations
- TLV: Threshold Limit Values
- TSCA: Toxic Substance Control Act
- TWA: Time Weighted Average
- WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2018.
- 2. International Agency for Research on Cancer Monographs, searched 2019.
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2019 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2019.

Preparation Date (mm/dd/yyyy)

: 11/23/2018

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Reviewed Date SDS (dd/mm/yyyy)


: 11/03/2019

Revision No. : 2

Revision Information : All sections modified.

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p><u>Prepared for:</u> Radiator Specialty Co. of Canada 3-3055 Dundas St West, Suite 50 Mississauga, ON, Canada, L5L 3R8 Telephone: 905-625-9117 (Mon. - Fri., 8 AM - 4 PM) Please direct all enquiries to Radiator Specialty.</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

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