

MATERIAL SAFETY DATA SHEET**SECTION 1: IDENTIFICATION****Product identifier** : **LIQUID CAR-N-TRUCK WASH****Product Use** : Vehicle wash**Chemical Family** : Mixture.**Manufacturer part no.** : VW5C**Supplier's name and address:****Radiator Specialty Co., of Canada**1711 Aimco Blvd.
Mississauga, ON, Canada
L4W 1H7**Manufacturer's name and address:**

Refer to Supplier

Information Telephone # : (905) 625-9117 (Monday - Friday, 8 AM - 4 PM)**24 Hr. Emergency Tel #** : 613-996-6666 (CANUTEC)**SECTION 2 - HAZARDS IDENTIFICATION**

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR).
WHMIS classification:
Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15.

WHMIS symbols required on a supplier label:



Emergency Overview : Blue liquid. Bland odour.
WARNING! May cause respiratory irritation. Direct eye contact may produce severe irritation with possible eye damage. May cause mild skin irritation. May be harmful if swallowed.

Contains material that may be harmful in the environment.

POTENTIAL HEALTH EFFECTS:**Signs and symptoms of short-term (acute) exposure**

Inhalation : If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract.

Skin : May cause mild skin irritation. Prolonged contact, such as when trapped against the skin under clothing or jewelry, may be more irritating.

Eyes : Direct eye contact may produce severe irritation with possible eye damage.

Ingestion : May cause nausea, vomiting, headache and other central nervous system effects.

Effects of long-term (chronic) exposure

: Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin.

Carcinogenic status : See TOXICOLOGICAL INFORMATION, Section 11.**Additional health hazards** : See TOXICOLOGICAL INFORMATION, Section 11.**Potential environmental effects**

: Contains material that may be harmful in the environment. See Section 12 for more environmental information.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	Wt. %
Sodium lauryl ether sulphate	68585-34-2	1.00 - 5.00
Ethoxylated nonylphenol	9016-45-9	1.00 - 5.00
Ethanol	64-17-5	0.10 - 1.00
Triethanolamine	102-71-6	0.10 - 1.00

SECTION 4 - FIRST AID MEASURES

- Inhalation** : If inhaled, move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Consult a physician.
- Skin contact** : Immediately flush with plenty of water, while removing contaminated clothing. If irritation persists, seek prompt medical attention.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms persist.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.
- Notes For Physician** : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES**Fire hazards/conditions of flammability**

- : Not flammable under normal conditions of use. However, may ignite if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Oxidizing properties

- : None known.

Explosion data: Sensitivity to mechanical impact / static discharge

- : Not expected to be sensitive to mechanical impact or static discharge.

Suitable extinguishing media

- : Dry chemical, foam, carbon dioxide and water fog.

Special fire-fighting procedures/equipment

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

- : Carbon oxides; Nitrogen oxides (NOx); Sulphur oxides; hydrogen cyanide; formaldehyde; Other unidentified organic compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.
- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.
- Prohibited materials** : Do not use combustible absorbents, such as sawdust.

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and open flames. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep containers closed when not in use.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks.

Incompatible materials : Strong oxidizing agents; Acids; Alkali metals; Halogenated compounds.

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Sodium lauryl ether sulphate	N/Av	N/Av	N/Av	N/Av
Ethoxylated nonylphenol	N/Av	N/Av	N/Av	N/Av
Ethanol	N/Av	1000 ppm	1000 ppm (1900 mg/m ³)	N/Av
Triethanolamine	5 mg/m ³	N/Av	N/Av	N/Av

Ventilation and engineering measures

- : Use in a well-ventilated area. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.

Skin protection : Gloves impervious to the material are recommended. Advice should be sought from glove suppliers. Depending on conditions of use, an impervious apron should be worn.

Eye / face protection : Safety glasses with side-shields or chemical splash goggles.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations

- : Avoid breathing vapours or spray. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, smoke or use cosmetics while working with this product. Remove and wash contaminated clothing before re-use. Wash with soap and water after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Viscous liquid	Appearance	: Clear blue liquid.
Odour	: Bland odour.	Odour threshold	: N/Av
pH	: 8.5 - 9.5		
Boiling point	: 100°C	Specific gravity	: 1.01 @ 20°C
Melting/Freezing point	: N/Av	Coefficient of water/oil distribution	: N/Av
Vapour pressure (mmHg @ 20° C / 68° F)	: N/Av	Solubility in water	: Complete
Vapour density (Air = 1)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Volatile organic Compounds (VOC's)	: N/Av	Volatiles (% by weight)	: N/Av
Flash point	: N/Av		
Flash point Method	: N/Av	Auto-ignition temperature	: Not available.
Lower flammable limit (% by vol.)	: N/Av	Upper flammable limit (% by vol.)	: N/Av
Flame Projection Length	: N/Av	Flashback observed	: N/Av
Absolute pressure of container	: N/Av	Viscosity	: N/Av
General Information	: No additional information.		

Section 10: STABILITY AND REACTIVITY

Stability and reactivity : Stable under the recommended storage and handling conditions prescribed.

Hazardous polymerization : Hazardous polymerization does not occur.

Conditions to avoid : Avoid heat and open flame. Avoid contact with incompatible materials.

Materials To Avoid And Incompatibility

- : Strong oxidizing agents; Acids; Alkali metals; Halogenated compounds.

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs : Eyes, skin, respiratory system and digestive system.

Routes of exposure : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES

Irritancy : May cause mild skin irritation. Possible severe eye irritation and tissue damage.

Toxicological data : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

<u>Ingredients</u>	<u>LC₅₀(4hr)</u> <u>inh, rat</u>	<u>LD₅₀</u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Sodium lauryl ether sulphate	N/Av	> 2000 mg/kg (No mortality)	> 2000 mg/kg (No mortality)
Ethoxylated nonylphenol	N/Av	1310 mg/kg	2000 mg/kg
Ethanol	> 32 380 ppm (61 mg/L) (vapour)	7060 mg/kg	> 15 800 mg/kg
Triethanolamine	N/Av	6110 mg/kg	> 2000 mg/kg (No mortality)

Carcinogenic status : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
Note that this product contains ethanol, a confirmed animal carcinogen (A3) by the ACGIH and human carcinogen (Group 1) by the IARC; however, this is only applicable when the chemical is present in alcoholic beverages.

Reproductive effects : Not expected to cause reproductive effects.

Teratogenicity : Contains: Ethanol. Ethanol has been shown to cause developmental / teratogenic effects, but only in the presence of maternal toxicity.

Mutagenicity : Contains: Ethanol. Ethanol has been shown to cause mutagenic effects but at extremely high oral doses, which are not applicable in an occupational setting.

Epidemiology : None known or reported by the manufacturer.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Synergistic materials : None known or reported by the manufacturer.

other important hazards : None known or reported by the manufacturer.

Conditions aggravated by overexposure : None known or reported by the manufacturer.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. The product contains the following substances which are hazardous for the environment: Sodium lauryl ether sulphate; Nonylphenol, ethoxylated.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC₅₀ / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Sodium lauryl ether sulphate	68585-34-2	1.2 mg/L (Zebra fish)	0.1 mg/L (Rainbow trout)	None.
Ethoxylated nonylphenol	9016-45-9	2.5 - 12.5 mg/L (Fathead minnow)	N/Av	None.
Ethanol	64-17-5	> 100 mg/L (Fathead minnow)	N/Av	None.
Triethanolamine	102-71-6	11 800 mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Sodium lauryl ether sulphate	68585-34-2	1.53 mg/L (Daphnia magna)	0.72 mg/L (Daphnia magna)	None.
Ethoxylated nonylphenol	9016-45-9	4.8 mg/L (Daphnia magna)	N/Av	None.
Ethanol	64-17-5	5012 mg/L (Daphnia magna)	N/Av	None.
Triethanolamine	102-71-6	609.88 mg/L [Ceriodaphnia (water flea)]	16 mg/L	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Sodium lauryl ether sulphate	68585-34-2	0.18 mg/L/72hr (Green algae)	0.09 mg/L/72hr (Green algae)	1
Ethoxylated nonylphenol	9016-45-9	N/Av	N/Av	None.
Ethanol	64-17-5	1000 mg/L/96hr (Green algae)	N/Av	None.
Triethanolamine	102-71-6	216 mg/L/72hr (Green algae)	N/Av	None.

Mobility : No data is available on the product itself.

Persistence : No data is available on the product itself.
The following ingredients are considered to be readily biodegradable: Sodium lauryl ether sulphate; Ethanol; Triethanolamine.
Contains the following chemicals which are not readily biodegradable: Nonylphenol, ethoxylated.

Bioaccumulation potential : No data is available on the product itself. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Sodium lauryl ether sulphate (CAS 68585-34-2)	4.05 - 7.29	N/Av
Ethoxylated nonylphenol (CAS 9016-45-9)	3.7	< 0.2, < 1.4
Ethanol (CAS 64-17-5)	- 0.31	N/Av
Triethanolamine (CAS 102-71-6)	- 1.59	< 3.9 (common carp)

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 waste according to recommendations in Section 7.

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

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	Not regulated	None	
TDG Additional information	None.				

SECTION 15 - REGULATORY INFORMATION**Labelling:**

WARNING! May cause respiratory irritation. Direct eye contact may produce severe irritation with possible eye damage. May cause mild skin irritation. May be harmful if swallowed.

PRECAUTIONS: Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and open flames. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep containers closed when not in use. Store in a cool, dry, well ventilated area, away from heat and ignition sources.

FIRST AID: If inhaled, move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Consult a physician. In case of skin contact, flush contaminated skin with plenty of water. If irritation persists, seek prompt medical attention. For eye contact, flush with running water for at least 15 minutes. Get medical attention if symptoms persist. If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

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

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

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

US Federal Information:

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

SECTION 16 - OTHER INFORMATION**Legend**

: ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
MSHA: Mine Safety and Health Administration
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
RTECS: Registry of Toxic Effects of Chemical Substances
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
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 2016.
2. International Agency for Research on Cancer Monographs, searched 2016.
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2016 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2016.

<u>Prepared for:</u> Radiator Specialty Co. of Canada 1711 Aimco Blvd. Mississauga, ON, Canada, L4W 1H7 Telephone: 905-625-9117 (Mon. - Fri., 8 AM - 4 PM) Please direct all enquiries to Radiator Specialty.	
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12. ECOLOGICAL INFORMATION.**END OF DOCUMENT**