

**MATERIAL SAFETY DATA SHEET****SECTION 1: IDENTIFICATION****Product identifier** : **CONCENTRATED TRUCK WASH - TOUGH SERIES****Product Use** : Automotive - Cleaner**Chemical Family** : Mixture of: Water; Surfactant; Sodium salts; Carboxylic acid; Preservative.**Manufacturer part no.** : TW64C**Supplier's name and address:****Manufacturer's name and address:****Radiator Specialty Co., of Canada**

Refer to Supplier

1711 Aimco Blvd.

Mississauga, ON, Canada

L4W 1H7

**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**: Clear blue liquid. Mild, soapy odour.  
WARNING! May be harmful if inhaled or swallowed. May cause respiratory irritation. May cause severe eye irritation. Prolonged or repeated skin contact may cause drying and irritation.**POTENTIAL HEALTH EFFECTS:****Signs and symptoms of short-term (acute) exposure***Inhalation* : Inhalation of mist causes irritation of respiratory system.*Skin* : May cause mild skin irritation.*Eyes* : May cause severe eye irritation. Symptoms may include redness, itching and swelling.*Ingestion* : Ingestion can cause gastrointestinal irritation, nausea, and diarrhea.**Effects of long-term (chronic) exposure**

: Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

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

: See ECOLOGICAL INFORMATION, Section 12.

**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

<b><u>Ingredients</u></b>	<b><u>CAS #</u></b>	<b><u>Wt. %</u></b>
Cocamidopropyl Betaine	61789-40-0	3.00 - 7.00
Citric acid	77-92-9	0.10 - 0.80

**SECTION 4 - FIRST AID MEASURES**

- Inhalation** : Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. If irritation or symptoms develop, seek medical attention.
- Skin contact** : Remove contaminated clothing. Wash off with soap and plenty of water. If irritation persists, seek prompt medical attention. Wash contaminated clothing before reuse.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.
- 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. 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**

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

**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; formaldehyde; Nitrogen oxides; 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.
- 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** : None known or reported by the manufacturer.

**SECTION 7 - HANDLING AND STORAGE**

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. 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. Store away from incompatibles and out of direct sunlight. 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; Strong acids; Strong bases.
- 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>
Cocamidopropyl Betaine	N/Av	N/Av	N/Av	N/Av
Citric acid	N/Av	N/Av	N/Av	N/Av

**Ventilation and engineering measures**

- : 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**

- : Chemical splash goggles are recommended. A full face shield may also be necessary.

**Other protective equipment**

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

**General hygiene considerations**

- : Avoid breathing vapour or mist. 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**

<b>Physical state</b>	: liquid	<b>Appearance</b>	: Clear blue liquid.
<b>Odour</b>	: soapy	<b>Odour threshold</b>	: N/Av
<b>pH</b>	: 7.5 - 8.0		
<b>Boiling point</b>	: ~ 100°C	<b>Specific gravity</b>	: 1.01
<b>Melting/Freezing point</b>	: 0°C	<b>Coefficient of water/oil distribution</b>	: N/Av
<b>Vapour pressure (mmHg @ 20° C / 68° F)</b>	: N/Av	<b>Solubility in water</b>	: Complete
<b>Vapour density (Air = 1)</b>	: N/Av	<b>Evaporation rate (n-Butyl acetate = 1)</b>	: N/Av
<b>Volatile organic Compounds (VOC's)</b>	: N/Av	<b>Volatiles (% by weight)</b>	: 0%
<b>Flash point</b>	: None.		
<b>Flash point Method</b>	: N/Av	<b>Auto-ignition temperature</b>	: N/Av
<b>Lower flammable limit (% by vol.)</b>	: N/Av	<b>Upper flammable limit (% by vol.)</b>	: N/Av
<b>Flame Projection Length</b>	: N/Av	<b>Flashback observed</b>	: N/Av
<b>Absolute pressure of container</b>	: N/Av	<b>Viscosity</b>	: N/Av
<b>General Information</b>	: No additional information.		

**Section 10: STABILITY AND REACTIVITY**

<b>Stability and reactivity</b>	: Stable under the recommended storage and handling conditions prescribed.
<b>Hazardous polymerization</b>	: Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	: Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.
<b>Materials To Avoid And Incompatibility</b>	: Strong oxidizing agents; Strong acids; Strong bases
<b>Hazardous decomposition products</b>	: None known, refer to hazardous combustion products in Section 5.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

<b>Target organs</b>	: Eyes, skin, respiratory system, digestive system, central nervous system. Kidneys
<b>Routes of exposure</b>	: <i>Inhalation:</i> YES <i>Skin Absorption:</i> NO <i>Skin &amp; Eyes:</i> YES <i>Ingestion:</i> YES
<b>Irritancy</b>	: Severe eye irritant. Mild skin irritant.

**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>	<b>LC<sub>50</sub>(4hr)</b> <u>inh, rat</u>	<b>LD<sub>50</sub></b>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Cocamidopropyl Betaine	N/Av	> 5000 mg/kg	> 2000 mg/kg
Citric acid	N/Av	3000 mg/kg	> 2000 mg/kg (No mortality)

**Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

**Reproductive effects** : Not expected to cause reproductive effects.

**Teratogenicity** : Not expected to be a teratogen.

**Mutagenicity** : Not expected to be mutagenic in humans.

**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** : CNS depression may result from extreme exposures.

**Conditions aggravated by overexposure**

: Pre-existing skin, eye, respiratory or blood system disorders.

## 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.

See the following tables for individual ingredient ecotoxicity data.

### Ecotoxicity data:

<u>Ingredients</u>	<b>CAS No</b>	<b>Toxicity to Fish</b>		
		<b>LC<sub>50</sub> / 96h</b>	<b>NOEC / 21 day</b>	<b>M Factor</b>
Cocamidopropyl Betaine	61789-40-0	2 mg/L (Zebra fish)	0.16 mg/L/28-day (Rainbow trout)	None.
Citric acid	77-92-9	1516 mg/L (Bluegill sunfish)	N/Av	None.

<u>Ingredients</u>	<b>CAS No</b>	<b>Toxicity to Daphnia</b>		
		<b>EC<sub>50</sub> / 48h</b>	<b>NOEC / 21 day</b>	<b>M Factor</b>
Cocamidopropyl Betaine	61789-40-0	1.9 mg/L (Daphnia magna)	0.9 mg/L	None.
Citric acid	77-92-9	1535 mg/L/24hr (Daphnia magna)	N/Av	None.

<u>Ingredients</u>	<b>CAS No</b>	<b>Toxicity to Algae</b>		
		<b>EC<sub>50</sub> / 96h or 72h</b>	<b>NOEC / 96h or 72h</b>	<b>M Factor</b>
Cocamidopropyl Betaine	61789-40-0	0.55 mg/L/96hr (Green algae)	N/Av	1
Citric acid	77-92-9	> 18 000 mg/L/96hr (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: Cocamidopropyl betaine; Citric acid.

**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>
Cocamidopropyl Betaine (CAS 61789-40-0)	-1.28 to 3.63	3 - 71
Citric acid (CAS 77-92-9)	- 1.72	3 (estimated)

**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. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

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

## SECTION 14: TRANSPORT INFORMATION

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

## SECTION 15 - REGULATORY INFORMATION

**Labelling:**

WARNING! May be harmful if inhaled or swallowed. May cause respiratory irritation. May cause severe eye irritation. Prolonged or repeated skin contact may cause drying and irritation.

PRECAUTIONS: Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Avoid contact with incompatible materials. Wash thoroughly after handling. Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sunlight.

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. If irritation persists, seek prompt medical attention. For skin contact, wash with soap and water while removing contaminated clothing. If irritation persists, seek prompt medical attention. For eye contact, flush with running water for at least 15 minutes. Seek immediate medical attention/advice. 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  
CNS: Central Nervous System

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.

<b><u>Prepared for:</u></b> 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.	
<b><u>Prepared by:</u></b> ICC The Compliance Center Inc. <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a>	

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: (M)SDS sections updated:  
 12. ECOLOGICAL INFORMATION

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