

**MATERIAL SAFETY DATA SHEET**

**SECTION 1 - IDENTIFICATION**

**Product identifier** : **DRY WASH**

**Product Code(s)** : None reported.

**Product Use** : Sundry chemical.

**Chemical Family** : Mixture.

**Supplier's name and address:**  
**The Dodge Chemical Company (Canada) Ltd.**  
 1265 Fewster Drive  
 Mississauga, Ontario, Canada  
 L4W 1A2

**Manufacturer's name and address:**  
 Refer to Supplier

**Information Telephone #** : (905) 625-0311

**24 Hr. Emergency Tel #** : (613) 996-6666 (CANUTEC)

**SECTION 2 - HAZARDS IDENTIFICATION**

**Classification** : WHMIS classification:  
 Class D1B (Materials Causing Immediate and Serious Toxic Effects, Toxic Material);  
 Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material).  
 Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200). Hazardous classification:  
 Acute Health Hazard;  
 Chronic Health Hazard.

**Emergency Overview** : Clear colourless liquid. Slight sweet odour.  
 Warning! POISON! May be fatal if inhaled. Harmful or fatal if swallowed. May be harmful if absorbed through the skin. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. Severe skin and eye irritant. May cause heritable genetic damage. Possible cancer hazard - contains material which may cause cancer.

**POTENTIAL HEALTH EFFECTS:**

**Signs and symptoms of short-term (acute) exposure**

- Inhalation* : Causes central nervous system depression. Symptoms of exposure above 100 ppm include headache, nausea, vomiting, dizziness, vertigo, fatigue, light headedness and coughing. Above 1000 ppm, visual perception and motor skill adversely affected. May result in unconsciousness and possibly death. Workplace exposures to 100 ppm may cause irregular heart beat.
- Skin* : Causes severe irritation. Symptoms may include redness and possibly blistering, if product is left on the skin. May be absorbed through the skin.
- Eyes* : Vapours may irritate eyes. Possible severe irritation. Temporary vision impairment (cloudy or blurred vision) is possible.
- Ingestion* : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. May be an aspiration hazard. Aspiration may occur during swallowing or vomiting, resulting in lung injury.

**Effects of long-term (chronic) exposure**

: Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin. Prolonged overexposure may cause liver and kidney effects.

**Carcinogenic status** : Cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

**Additional health hazards** : Possible mutagen. See TOXICOLOGICAL INFORMATION, Section 11.

**Potential environmental effects** : See ECOLOGICAL INFORMATION, Section 12.

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

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
Trichloroethylene	79-01-6	60.00 - 100.00

**SECTION 4 - FIRST AID MEASURES**

- Inhalation** : Immediately remove person to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Seek immediate medical attention/advice.
- Skin contact** : Remove/Take off immediately all contaminated clothing. Wash exposed area thoroughly with soap and water for at least 15 minutes. Seek immediate medical attention/advice. Wash contaminated clothing before reuse.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. Obtain medical attention immediately.
- Ingestion** : Call a physician or Poison Control Centre immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
- Notes For Physician** : Treat symptomatically. Adrenalin should never be given to persons overexposed to trichloroethylene.

**SECTION 5 - FIRE FIGHTING MEASURES**

**Fire hazards/conditions of flammability**

- : Not flammable under normal conditions of use. High concentrations of vapours in air can be ignited by high intensity energy sources. Vapours are heavier than air and collect in confined and low-lying areas. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

**Flammability classification (OSHA 29 CFR 1910.1200)**

- : Combustible Liquid Class III B.

**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, alcohol foam, carbon dioxide, or water spray.

**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. Avoid spreading burning liquid with water spray used for cooling purposes.

**Hazardous combustion products**

- : Hydrogen chloride gas; Chlorine; Phosgene.

**NFPA Rating**

- |                  |                        |                       |                         |            |
|------------------|------------------------|-----------------------|-------------------------|------------|
| 0 - Minimal      | 1 - Slight             | 2 - Moderate          | 3 - Serious             | 4 - Severe |
| <hr/>            |                        |                       |                         |            |
| <i>Health:</i> 2 | <i>Flammability:</i> 1 | <i>Instability:</i> 0 | <i>Special Hazards:</i> | None.      |

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

- : Restrict access to area until completion of clean-up. Keep all other personnel upwind and away from the spill/release. Individuals involved in the cleanup must wear appropriate personal protective equipment. Refer to protective measures listed in sections 7 and 8.

**Environmental precautions**

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

**Spill response/cleanup**

- : Remove all sources of ignition. Turn off heating/cooling systems to prevent contamination of building. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Pick up and transfer to properly labelled containers. Refer to Section 13 for disposal of contaminated material. Notify the appropriate authorities as required.

**Prohibited materials**

- : None known or reported by the manufacturer.

**Special spill response procedures**

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).  
US CERCLA Reportable quantity (RQ): Trichloroethylene (100 lbs / 45.4 kg).

**SECTION 7 - HANDLING AND STORAGE**

**DRY WASH**

MSDS Revision Date (dd/mm/yyyy): 06/01/2010

Page 3 of 7

- Safe Handling procedures** : Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Keep away from bases and incompatibles. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Store out of direct sunlight.
- Incompatible materials** : Aluminum; Strong alkalis; Epoxides; Oxidizing agents; Barium; Lithium ; magnesium; Titanium. Liquid oxygen or other strong oxidants may form explosive mixtures with Trichloroethylene.
- 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>
Trichloroethylene	10 ppm	25 ppm	100 ppm	200 ppm (Ceiling)

**Ventilation and engineering measures**

- : Open doors and/or windows. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

**Respiratory protection**

- : Use NIOSH/MSHA approved full-face respirator with an organic vapour cartridge if the recommended exposure limit is exceeded. Advice should be sought from respiratory protection specialists.

**Skin protection**

- : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.

**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. Depending on conditions of use, an impervious apron should be worn.

**General hygiene considerations**

- : Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	: Clear liquid.	<b>Appearance</b>	: colourless
<b>Odour</b>	: Slight sweet odour.	<b>Odour threshold</b>	: 60 ppm
<b>pH</b>	: N/Av		
<b>Boiling point</b>	: 86.7°C (188°F)	<b>Specific gravity</b>	: 1.45
<b>Melting/Freezing point</b>	: N/Av	<b>Coefficient of water/oil distribution</b>	: Log Poct = 2.42
<b>Vapour pressure (mmHg @ 20° C / 68° F)</b>	: 55	<b>Solubility in water</b>	: 0.1g / 100 g @ 25°C (77°F)
<b>Vapour density (Air = 1)</b>	: 4.5	<b>Evaporation rate (n-Butyl acetate = 1)</b>	: 0.3
<b>Volatile organic Compounds (VOC's)</b>	: N/Av	<b>Volatiles (% by weight)</b>	: 100%
<b>Flash point</b>	: N/Av		
<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

**Section 10: Stability And Reactivity**

**DRY WASH**

MSDS Revision Date (dd/mm/yyyy): 06/01/2010

Page 4 of 7

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed. May slowly decompose in air to form hazardous decomposition products. This process may be sped up by direct sunlight, heat and moisture. Contact with water may form corrosive dichloroacetic acid and hydrogen chloride. Contact with aluminum parts in a pressurized fluid system may cause violent reactions.
- Hazardous polymerization** : Hazardous polymerisation does not occur.
- Conditions to avoid** : Avoid moisture. Avoid heat and open flame. Avoid contact with incompatible materials. Keep out of direct sunlight.
- Materials To Avoid And Incompatibility** : Incompatible materials (see Section 7).
- Hazardous decomposition products** : Hydrogen chloride gas; Phosgene; Chlorine; dichloroacetic acid; dichloroacetyl chloride.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

- Target organs** : Eyes, skin, respiratory system, central nervous system, liver and kidneys.
- Routes of exposure** : *Inhalation:* YES *Skin Absorption:* YES *Skin & Eyes:* YES *Ingestion:* YES
- 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>LC<sub>50</sub>(4hr)</u>		<u>LD<sub>50</sub></u>	
	<u>inh. rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>	
Trichloroethylene	8000 ppm	7200 mg/kg	> 29,000 mg/kg	

- Carcinogenic status** : Contains: Trichloroethylene. Trichloroethylene is listed as potentially carcinogenic by IARC and NTP.
- Reproductive effects** : Not expected to have other reproductive effects.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : Contains: Trichloroethylene. Trichloroethylene may cause mutations in non-reproductive (somatic) cells, based on animal data.
- Epidemiology** : Not available.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : Consumption of alcoholic beverages may increase the potential for development of toxic effects resulting from exposure to this product.
- Irritancy** : Severe eye irritant. Severe skin irritation
- other important hazards** : None known or reported by the manufacturer.
- Conditions aggravated by overexposure** : Pre-existing skin and respiratory disorders. Alcoholism, acute and chronic kidney and/or liver disease, rhythm disorders of the heart, and neuritis and other disorders of the nervous system.



**SECTION 12 - ECOLOGICAL INFORMATION**

- Ecotoxicity** : There is no data available for this product. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself.
- Bioaccumulation potential** : No data is available on the product itself.
- Other Adverse Environmental effects** : No data is available on the product itself.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

- Handling for Disposal** : Handle waste according to recommendations in Section 7.
- Methods of Disposal** : Improper disposal can cause damage to the environment. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

**SECTION 14: TRANSPORT INFORMATION**

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1710	TRICHLOROETHYLENE SOLUTION	6.1	III	
<b>TDG Additional information</b>	May be shipped as Limited Quantity when transported in containers no larger than 5.0 Litres; in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				
49CFR/DOT	UN1710	Trichloroethylene solution	6.1	III	
<b>49CFR/DOT Additional information</b>	May be shipped as a Limited quantity when transported in containers no larger 4.0 L (1.0 gallon) for liquids or 5.0 kg (11 pounds) for solids, in packages not exceeding 30 kg (66 pounds) gross mass. US CERCLA Reportable quantity (RQ): Trichloroethylene (100 lbs / 45.4 kg).				

**SECTION 15 - REGULATORY INFORMATION**

**US Federal Information:**

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

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): Trichloroethylene (100 lbs / 45.4 kg).

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Acute Health Hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: Trichloroethylene.

**US State Right to Know Laws:**

California Proposition 65: This product contains a chemical known to the State of California to cause cancer. Contains: Trichloroethylene.

Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States: Trichloroethylene (CA, MA, MN, NJ, PA, RI).

**International Information:**

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). Refer to Section 2 for a WHMIS Classification for this product.

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

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.**

**SECTION 16 - OTHER INFORMATION**

**HMIS Rating** : \* - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe  
*Health: \*2 Flammability: 1 Reactivity: 0*

**Legend** : ACGIH: American Conference of Governmental Industrial Hygienists  
 CA: California  
 CAS: Chemical Abstract Services  
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 CFR: Code of Federal Regulations


**DRY WASH**

MSDS Revision Date (dd/mm/yyyy): 06/01/2010

- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- HMIS: Hazardous Materials Identification System
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- Inh: Inhalation
- MA: Massachusetts
- MN: Minnesota
- N/Ap: Not Applicable
- N/Av: Not Available
- NFPA: National Fire Protection Association
- NJ: New Jersey
- NIOSH: National Institute of Occupational Safety and Health
- NTP: National Toxicology Program
- OSHA: Occupational Safety and Health Administration
- PA: Pennsylvania
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RI: Rhode Island
- SARA: Superfund Amendments and Reauthorization Act
- 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 and Biological Exposure Indices for 2009.
- 2. International Agency for Research on Cancer Monographs, searched 2009.
- 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2009 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheet from manufacturer.
- 5. US EPA Title III List of Lists - October 2006 version.
- 6. California Proposition 65 List - December 18, 2009 version.

<p><b><u>Prepared for:</u></b>          The Dodge Chemical Company (Canada) Ltd.          1265 Fewster Drive          Mississauga, ON, Canada          L4W 1A2          Telephone: (905) 625-0311          Please direct all enquiries to The Dodge Chemical Company (Canada).</p>	
<p><b><u>Prepared by:</u></b>          ICC The Compliance Center Inc.  <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a></p>	

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: 2

**DRY WASH**

MSDS Revision Date (dd/mm/yyyy): 06/01/2010

Page 7 of 7

**Revision Information** : Converted from 9 section format to 16 section format. All sections modified.

**END OF DOCUMENT**