

MATERIAL SAFETY DATA SHEET**SECTION I - PRODUCT IDENTIFICATION**

Product Name : **RECTIFIANT**

Product Use : Water corrective

Chemical Family : Mixture.

Supplier's name and address:
The Dodge Chemical Company (Canada) Ltd.
1265 Fewster Drive
Mississauga, Ontario, Canada
L4W 1A2
(905) 625 0311

Manufacturer's name and address:
Refer to Supplier

24 Hr. Emergency Tel # : (613) 996-6666 (CANUTEC) **WHMIS CLASS** : Not regulated.

SECTION II - HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀ mg/kg</u>	
			<u>(Rat, ihl.)</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Propylene glycol	57-55-6	15.0 - 40.0	N/Av	21,800	20,800

SECTION III - PHYSICAL DATA

Physical state : Liquid.

Odour : Mild glycol odour

Appearance : Clear, pale straw colour liquid

Odour threshold : N/Av **pH** : 9.5 - 10.5

Boiling point : 97 - 99°C (207 - 211°F) **Specific gravity** : 1.045 - 1.055

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) : < 1 **Evaporation rate (n-Butyl acetate = 1)** : < 1

Volatiles (% by weight) : 93

SECTION IV - FIRE AND EXPLOSION DATA

Fire hazards/conditions of flammability : Not flammable under normal conditions of use. However, may ignite if exposed to extreme heat and flame.

Flash point : > 93°C (> 200°F)

Flash point Method : TCC **Auto-ignition temperature** : N/Av

Lower flammable limit (% by vol.) : N/Av **Upper flammable limit (% by vol.)** : N/Av

Means Of Extinction : Water, dry chemical, foam or carbon dioxide may be used as appropriate.

Explosion data: Sensitivity to mechanical impact / static discharge : N/Av

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.

Unusual Fire and Explosion Hazards : Vapours are heavier than air and collect in confined and low-lying areas. Closed containers may build up pressure when exposed to heat and flame.

Hazardous combustion products

: Oxides of carbon and nitrogen.

SECTION V - REACTIVITY DATA

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed.
Hazardous polymerisation does not occur.
- Conditions of reactivity** : Keep away from extreme heat and flame.
- Incompatible materials** : Strong oxidizing agents, acids and bases.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 4.

SECTION VI - TOXICOLOGICAL PROPERTIES***** Routes of exposure and acute/chronic effects *******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>
Propylene glycol	*10 mg/m ³	N/Av	N/Av	N/Av

*Note: The ACGIH TLV listed above for Propylene glycol is an AIHA WEEL.

- Routes of exposure** : Skin contact; Eye contact; Ingestion; Inhalation.
- Irritancy** : May be mildly irritating to eyes and skin.
- Potential Acute Health Effects**
- Inhalation* : Minor irritation may develop if exposed to heated vapours or mists.
- Skin* : May cause mild skin irritation.
- Eyes* : Direct contact may cause mild eye irritation. Symptoms may include stinging and tearing.
- Ingestion* : Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system.
- Effects of Chronic Exposure** : Prolonged or repeated skin contact may cause drying and irritation.
- Carcinogenicity** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
- Reproductive effects** : Not expected to have other reproductive effects.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : N/Av
- Medical Conditions Aggravated By Overexposure** : Pre-existing skin conditions.

SECTION VII - FIRST AID

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. Keep warm and in a quiet place. Obtain medical attention if symptoms develop and persist.
- Skin contact** : Remove contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention if symptoms develop and persist. Wash contaminated clothing before re-use.
- Eye contact** : If in eyes, rinse with water for 15 minutes. Obtain medical attention if irritation persists.
- Ingestion** : Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.

SECTION VIII - PREVENTIVE MEASURES

RECTIFIANT

MSDS Preparation Date: December 21, 2006

Spill response/cleanup : Individuals involved in the cleanup must wear appropriate personal protective equipment. Remove all sources of ignition. 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. Place absorbent material in a suitable, closed and labelled container for later disposal (see below). Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. Notify the appropriate authorities as required.

Methods of Disposal : Handle according to recommendations listed below. Improper disposal can cause damage to the environment. Dispose of in accordance with federal, provincial and local hazardous waste laws.

***** PROTECTIVE EQUIPMENT *****

Ventilation and engineering measures

: Provide adequate cross air circulation. 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.

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

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.

***** STORAGE & HANDLING *****

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 eyes, skin and clothing. Keep away from heat, sparks, and open flames. Keep away from acids and other incompatibles. Use caution when opening cap. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Storage requirements : Store in a cool, dry, well ventilated area, away from heat and ignition sources. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. No smoking in the area. Inspect periodically for damage or leaks.

Special Shipping Information

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

SECTION IX - PREPARATION INFORMATION

- Legend** :
- ACGIH: American Conference of Governmental Industrial Hygienists
 - AIHA: American Industrial Hygiene Association
 - CAS: Chemical Abstract Services
 - IARC: International Agency for Research on Cancer
 - Inh: Inhalation
 - MSHA: Mine Safety and Health Administration
 - N/Ap: not applicable
 - N/Av: not available
 - NTP: National Toxicology Program
 - NIOSH: National Institute of Occupational Safety and Health
 - OSHA: Occupational Safety and Health Administration
 - PEL: Permissible exposure limit
 - STEL: Short Term Exposure Limit
 - TCC: Tagliabue Closed Cup
 - TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 - TLV: Threshold Limit Values
 - TWA: Time Weighted Average
 - WEEL: Workplace Environmental Exposure Level
 - WHMIS: Workplace Hazardous Materials Identification System

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- References**
- : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2006.
 - 2. International Agency for Research on Cancer Monographs, searched 2006.
 - 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2006 (Chempendium and RTECs).
 - 4. Material Safety Data Sheet from manufacturer.

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Prepared by:

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