

## MATERIAL SAFETY DATA SHEET

### SECTION I - PRODUCT IDENTIFICATION

**Product Name** : **PERMAFLOW V-2**  
**Product Use** : Pre/Co-Injection Chemical  
**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>LC<sub>50</sub>(4hr)</u>	<u>LD<sub>50</sub> mg/kg</u>	
			<u>(Rat, ihl.)</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Propylene glycol	57-55-6	7.0 - 13.0	N/Av	21,800	20,800

### SECTION III - PHYSICAL DATA

**Physical state** : Liquid.  
**Odour** : Perfumed odour.  
**Appearance** : Clear, pale pink-orange, slightly fluorescent liquid  
**Odour threshold** : N/Av      **pH** : 9.5 - 10.5  
**Boiling point** : 99 - 101oC (210 - 214oF)      **Specific gravity** : 1.025 - 1.035  
**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)** : 96

### 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** : > 93oC (> 200oF)  
**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** : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.  
**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.  
**Unusual Fire and Explosion Hazards**

: Flammable vapours can be released if material is heated above its flash point. 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.

**Hazardous combustion products**

: Oxides of carbon and nitrogen.

**SECTION V - REACTIVITY DATA**

**Stability and reactivity** : Stable at ambient temperatures and pressures. 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 \*\*\***

<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/m3	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. Drink plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

**SECTION VIII - PREVENTIVE MEASURES**

- 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. Flush any residue in the spill area with water. 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**

- : None required under normal conditions. Provide adequate cross air circulation. Use sufficient mechanical ventilation to maintain exposures below the TLV.

**Respiratory protection**

- : None required when used as intended. 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**

- : None required under normal conditions. If splashing might occur, wear eye protection such as safety glasses with side shields.

**Other protective equipment**

- : An eyewash station and safety shower should be made available in the immediate working area. Wear sufficient clothing to prevent skin contact. Wash contaminated clothing before reuse.

**\*\*\* 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. 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. No smoking in the area. Inspect periodically for damage or leaks.

<b>Special Shipping Information</b>					
<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 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  
 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

**PERMAFLOW V-2**

**MSDS Preparation Date:** January 16, 2007

Page 4 of 4

**References**

- : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2006.  
2. International Agency for Research on Cancer Monographs, searched 2007.  
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2007 (Chempendium and RTECs).  
4. Material Safety Data Sheet from manufacturer.

**Preparation Date:** : January 16, 2007

**Prepared by:**

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