

MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product identifier : **RESTORATIVE**

Product Code(s) : None reported.

Product Use : 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

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 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 : Lotion-like emulsion. pink. Perfumed odour.
 Warning! May be harmful if inhaled or swallowed. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. Causes eye irritation. Prolonged or repeated skin contact may cause drying and irritation. Prolonged overexposure may cause liver and kidney effects.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Skin : May cause mild skin irritation on prolonged contact.

Eyes : Causes moderate to severe irritation.

Ingestion : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness 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. Prolonged overexposure may cause liver and kidney effects.

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

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
Isopropanol	67-63-0	1.00 - 5.00
Propylene glycol	57-55-6	7.00 - 13.00

SECTION 4 - FIRST AID MEASURES

Inhalation : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.

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- Skin contact** : Immediately flush with plenty of water, while removing contaminated clothing. If irritation or symptoms develop, seek medical attention. Wash contaminated clothing before re-use.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.
- Ingestion** : Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.
- 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. Vapours are heavier than air and collect in confined and low-lying areas. Vapour can travel considerable distance and flashback to a source of ignition. 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

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

Hazardous combustion products

- : Carbon oxides, nitrogen oxides, unburned alcohols and other irritant gases.

NFPA Rating

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

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. Ventilate area of release. Stop the spill at source if it is safe to do so. 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.

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): None reported.

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures

- : Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Keep away from oxidizing agents and incompatibles. Use caution when opening cap. Keep containers closed when not in use. Wash thoroughly after handling.

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- 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. Inspect periodically for damage or leaks.
- Incompatible materials** : Acids, strong oxidizing agents, 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

Ingredients	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Isopropanol	200 ppm	400 ppm	400 ppm	N/Av
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.

Ventilation and engineering measures

- : General mechanical ventilation and local exhaust is recommended for use with this product.

Respiratory protection

- : Use in a well-ventilated area. If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. 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 resistant goggles must be worn.

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

- : Avoid breathing vapour or 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

Physical state	: Lotion-like emulsion.	Appearance	: pink
Odour	: Perfumed odour.	Odour threshold	: N/Av
pH	: N/Av		
Boiling point	: 91 - 93°C (196 - 200°F)	Specific gravity	: 1.00 - 1.01
Melting/Freezing point	: N/Av	Coefficient of water/oil distribution	: N/Av
Vapour pressure (mmHg @ 20° C / 68° F)	: N/Av	Solubility in water	: Dispersible
Vapour density (Air = 1)	: > 1	Evaporation rate (n-Butyl acetate = 1)	: < 1
Volatile organic Compounds (VOC's)	: N/Av	Volatiles (% by weight)	: 99%
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
Flame Projection Length	: N/Av	Flashback observed	: N/Av

Section 10: Stability And Reactivity

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed.
- Hazardous polymerization** : Hazardous polymerisation does not occur.
- Conditions to avoid** : Avoid excessive heat, sparks and open flame. Extreme heat or cold may break emulsion, lowering active properties for restoration.
- Materials To Avoid And Incompatibility** : Acids, strong oxidizing agents, bases.

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Hazardous decomposition products

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

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs : Eyes, skin, respiratory system, central nervous system, liver and kidneys.

Routes of exposure : *Inhalation:* YES *Skin Absorption:* NO *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>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Isopropanol	17,000 ppm	4720 mg/kg	12,890 mg/kg
Propylene glycol	N/Av	21,800 mg/kg	20,800 mg/kg

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

Reproductive effects : Not expected to have other reproductive effects.

Teratogenicity : This product contains Isopropanol. Isopropanol is no longer considered a developmental toxin. Teratogenic / fetotoxic effects were observed in animals, however the effects were observed in the presence of maternal toxicity or at concentrations where maternal toxicity is expected to occur.

Mutagenicity : Not expected to be mutagenic in humans.

Epidemiology : Not available.

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

Synergistic materials : N/Av

Irritancy : Moderate to severe eye irritant. Mild skin irritant.

other important hazards : CNS depression may result from extreme exposures.

Conditions aggravated by overexposure : Pre-existing skin, eye, respiratory and central nervous system disorders.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity : No data is available on the product itself. 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	None	Not regulated.	Not regulated	none	
TDG Additional information	None.				

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49CFR/DOT	None	Not regulated.	Not regulated	none	
49CFR/DOT Additional information	None.				

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): None reported.

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: Isopropanol.

US State Right to Know Laws:

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States: Propylene glycol (MN, NJ, PA, RI); Isopropyl alcohol (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
		<i>Health: *2</i>		<i>Flammability: 1</i>		<i>Reactivity: 0</i>

Legend :

- ACGIH: American Conference of Governmental Industrial Hygienists
- AIHA: American Industrial Hygiene Association
- CA: California
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CNS: Central Nervous System
- 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
- LC: Lethal Concentration
- LD: Lethal Dose
- MA: Massachusetts
- MN: Minnesota
- MSHA: Mine Safety and Health Administration


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- N/Ap: Not Applicable
- N/Av: Not Available
- NFPA: National Fire Protection Association
- NIOSH: National Institute of Occupational Safety and Health
- NJ: New Jersey
- NTP: National Toxicology Program
- PA: Pennsylvania
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RI: Rhode Island
- RTECS: Registry of Toxic Effects of Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act
- 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

References

- : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2009.
- 2. International Agency for Research on Cancer Monographs, searched 2010.
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2010 (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><u>Prepared for:</u> 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>	
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DISCLAIMER OF LIABILITY

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Preparation Date (mm/dd/yyyy)

: 01/22/2007

Reviewed Date (mm/dd/yyyy)

: 01/31/2013

Revision No.

: 2

Revision Information

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

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