



SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	MEG & Water Mixture (50%wt/wt)
Other means of identification	Not available
Recommended use	Not available.
Recommended restrictions	None known.
Manufacturer information	Irving Blending & Packaging PO Box 1169 Saint John, NB E2L 4E6 CA Phone: 1.800.574.5823 Emergency Phone: 1.506.648.3060
Supplier	See above.

2. Hazards Identification

Physical hazards	Not classified.	
Health hazards	Reproductive toxicity	Category 1B
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	
Label elements		



Signal word	Danger
Hazard statement	May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF exposed or concerned: Get medical advice/attention.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC) None known

WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC) None known

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
1,2-Ethanediol		107-21-1	47.5
Ethanol, 2,2"-oxybis-		111-46-6	2.5

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Never give anything by mouth if victim is unconscious, or is convulsing. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dizziness. Nausea. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes, skin and clothing. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin and clothing. Do not breathe mist or vapor. Wear appropriate personal protective equipment. Use only with adequate ventilation. Avoid prolonged exposure. Avoid contact during pregnancy/while nursing. Observe good industrial hygiene practices. Wash thoroughly after handling. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
1,2-Ethanediol (CAS 107-21-1)	Ceiling	100 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
1,2-Ethanediol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.
		50 ppm	Vapor.
	STEL	20 mg/m3	Particulate.
	TWA	10 mg/m3	Particulate.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
1,2-Ethanediol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
1,2-Ethanediol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
1,2-Ethanediol (CAS 107-21-1)	Ceiling	127 mg/m3	Vapor and mist.
		50 ppm	Vapor and mist.

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
1,2-Ethanediol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
1,2-Ethanediol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Ethanol, 2,2"-oxybis- (CAS 111-46-6)	TWA	10 mg/m3

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH.
Appropriate engineering controls	Ensure adequate ventilation.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear chemical goggles.
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
Thermal hazards	Not applicable.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	7.4
Melting point/freezing point	Not available.

Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.0654 @ 15°C
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and Reactivity

Reactivity	May react with incompatible materials.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.	
Information on likely routes of exposure		
Ingestion	May cause stomach distress, nausea or vomiting.	
Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation.	
Skin contact	No adverse effects due to skin contact are expected.	
Eye contact	Direct contact with eyes may cause temporary irritation.	
Symptoms related to the physical, chemical and toxicological characteristics	Dizziness. Nausea.	
Information on toxicological effects		
Acute toxicity	Although animal toxicity values do not meet criteria, ethylene glycol is toxic to humans. There are numerous human case reports of toxicity and death published in the literature.	
Components	Species	Test Results
1,2-Ethenediol (CAS 107-21-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	9500 mg/kg

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Rat	2725 mg/m3, 4 hr
<i>Oral</i>		
LD50	Cat	1650 mg/kg
	Dog	5500 mg/kg
	Guinea pig	6600 mg/kg
	Human	1110 - 1665 mg/kg
	Mouse	7500 mg/kg
	Rabbit	5000 mg/kg
	Rat	5890 mg/kg
Ethanol, 2,2''-oxybis- (CAS 111-46-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	11890 mg/kg
<i>Oral</i>		
LD50	Cat	3300 mg/kg
	Dog	9000 mg/kg
	Guinea pig	8700 mg/kg
	Human	1000 mg/kg
	Mouse	23700 mg/kg
		13.3 g/kg
	Rat	12565 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
Canada - Alberta OELs: Irritant		
1,2-Ethanediol (CAS 107-21-1)	Irritant	
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity		
ACGIH Carcinogens		
1,2-Ethanediol (CAS 107-21-1)	A4 Not classifiable as a human carcinogen.	
Canada - Manitoba OELs: carcinogenicity		
ETHYLENE GLYCOL, AEROSOL ONLY (CAS 107-21-1)	Not classifiable as a human carcinogen.	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	May damage fertility or the unborn child.	
Teratogenicity	In rats and mice exposed to ethylene glycol, embryotoxic (late resorptions), fetotoxic (reduced fetal body weight) and teratogenic (external, soft tissue and skeletal defects) effects were observed at relatively high oral doses that caused no or minimal maternal toxicity.	

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity	See below		
Ecotoxicological data			
Components		Species	Test Results
1,2-Ethanediol (CAS 107-21-1)			
Crustacea	EC50	Daphnia	46300 mg/L, 48 Hours
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	8050 mg/L, 96 hours
Ethanol, 2,2"-oxybis- (CAS 111-46-6)			
Crustacea	EC50	Daphnia	84000 mg/L, 48 Hours
Aquatic			
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	> 32000 mg/L, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential			
Mobility in soil	No data available.		
Mobility in general	Not available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification	In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.
U.S. Department of Transportation (DOT)	
Basic shipping requirements:	
UN number	UN3082
Proper shipping name	Environmentally hazardous substances, liquid, n.o.s.
Technical name	1,2-Ethanediol
Hazard class	9
Packing group	III
Special provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
Packaging exceptions	155
Packaging non bulk	203
Packaging bulk	241
Transportation of Dangerous Goods (TDG - Canada)	
	Not regulated as dangerous goods.



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada Priority Substances List (Second List): Listed substance

1,2-Ethanediol (CAS 107-21-1) Listed.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Not applicable

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1,2-Ethanediol (CAS 107-21-1) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1,2-Ethanediol	107-21-1	47.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

1,2-Ethanediol (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations

US - California Hazardous Substances (Director's): Listed substance

1,2-Ethanediol (CAS 107-21-1) Listed.

US - Illinois Chemical Safety Act: Listed substance

1,2-Ethanediol (CAS 107-21-1)

US - Louisiana Spill Reporting: Listed substance

1,2-Ethanediol (CAS 107-21-1) Listed.

US - Minnesota Haz Subs: Listed substance

1,2-Ethanediol (CAS 107-21-1) Listed.

Ethanol, 2,2"-oxybis- (CAS 111-46-6) Listed.

US - New Jersey RTK - Substances: Listed substance

1,2-Ethanediol (CAS 107-21-1)

US - Texas Effects Screening Levels: Listed substance

1,2-Ethanediol (CAS 107-21-1) Listed.
 Ethanol, 2,2"-oxybis- (CAS 111-46-6) Listed.

US - Washington Chemical of High Concern to Children: Listed substance

1,2-Ethanediol (CAS 107-21-1)

US. Massachusetts RTK - Substance List

1,2-Ethanediol (CAS 107-21-1)

US. New Jersey Worker and Community Right-to-Know Act

1,2-Ethanediol (CAS 107-21-1)

US. Pennsylvania Worker and Community Right-to-Know Law

1,2-Ethanediol (CAS 107-21-1)
 Ethanol, 2,2"-oxybis- (CAS 111-46-6)

US. Rhode Island RTK

1,2-Ethanediol (CAS 107-21-1)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Inventory status

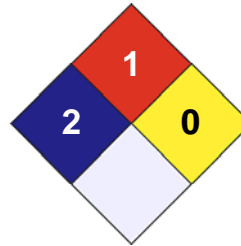
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 2
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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01

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Prepared by

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Other information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.