

Antifreeze/Coolant 50/50 Premixed

SECTION 1. IDENTIFICATION

Product Identifier	Antifreeze/Coolant 50/50 Premixed
Other Means of Identification	16-914, 16-919, 26-919, 26-919-1000, 86-914, 36-914AMSEXP, 36-919AMSEXP-1K, 26-919R-1000, 26-919R, 16-914R
Recommended Use	Please refer to Product label.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	Recochem Inc., 850 Montee de Liesse, Montreal, QC, H4T 1P4, Compliance and Regulatory Department, 905-878-5544, www.recochem.com
Emergency Phone No.	CANUTEC, 613-996-6666, 24 Hours
SDS No.	1972

SECTION 2. HAZARD IDENTIFICATION

Classification

Acute toxicity (Oral) - Category 4; Reproductive toxicity - Category 1A; Specific target organ toxicity (repeated exposure) - Category 2

Label Elements



Signal Word:
Danger

Hazard Statement(s):

- H302 Harmful if swallowed.
- H360 May damage fertility or the unborn child.
- H373 May cause damage to organs (kidneys) through prolonged or repeated exposure if swallowed.

Precautionary Statement(s):

Prevention:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe fume, mist, vapours, spray.
- P264 Wash hands and skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves, eye protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

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P330 Rinse mouth.
P308 + P313 IF exposed or concerned: Get medical advice or attention.

Storage:
Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Ethylene glycol	107-21-1	30-60		
4-tert-Butylbenzoic acid	98-73-7	1-5		

Notes

Use of Generic SDS:

If the concentration or actual concentration range of an ingredient of a particular hazardous product in the series is different from the concentration or actual concentration range disclosed for the rest of the series, either the concentration or the actual concentration range must be indicated beside that ingredient under item 3 (Composition/Information on ingredients) of the SDS. Furthermore, if any other specific information element(s) (such as flash point, numerical measure of toxicity, etc.) for a particular hazardous product in the series differs from that of the other products in the series (without affecting the classification), the information element relevant to that hazardous product must be disclosed on the SDS with an indication to which hazardous product each relates.

Source: Health Canada - Technical Guidance on the Requirements of the Hazardous Products Act and the Hazardous Products Regulations WHMIS 2015 Supplier Requirements - pg 117

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Call a Poison Centre or doctor if you feel unwell.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Call a Poison Centre or doctor if you feel unwell. Clean clothing, shoes and leather goods.

Eye Contact

If eye irritation persists, get medical advice or attention. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water. Call a Poison Centre or doctor if you feel unwell.

Most Important Symptoms and Effects, Acute and Delayed

If swallowed: There are 3 stages of effects, which can overlap. Early symptoms can include upset stomach, slurred speech, clumsiness, drowsiness, and convulsions. Second stage symptoms can include rapid heartbeat and breathing, bluish lips and skin, fluid in the lungs and heart failure. In the last stage, there can be kidney stones and kidney damage with lower back pain, and increased then decreased urine production. There may be delayed nervous system effects such as paralysis of the face, clumsiness, impaired hearing and blurred vision. Death can occur at any stage.

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Immediate Medical Attention and Special Treatment

Target Organs

Digestive system, nervous system, heart, digestive system, kidneys, skin.

Special Instructions

The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, central nervous system depression and kidney injury. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. Treatment with ethanol to inhibit the metabolism of glycol to oxalate. Early administration of ethanol may counter the toxic effects of ethylene glycol (cardiopulmonary effects attributed to metabolic acidosis and renal damage).

Hemodialysis or peritoneal dialysis have been of benefit. Pre-existing respiratory and skin disorders may be aggravated by over-exposure to this product. Treat symptomatically and supportively.

Medical Conditions Aggravated by Exposure

Dermatitis.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder or appropriate foam.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Can ignite if strongly heated.

In a fire, the following hazardous materials may be generated: irritating chemicals.

Special Protective Equipment and Precautions for Fire-fighters

Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.

See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

When handling concentrated product: avoid breathing in this product. Prevent skin contact. Avoid repeated or prolonged skin contact. Do not swallow. Avoid generating vapours or mists. Avoid heating that will increase the amount of vapours. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. For large-scale use: do NOT eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering eating areas or leaving work area. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.

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Conditions for Safe Storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Ethylene glycol	10 mg/m ³	100 mg/m ³	Not established	50 ppm		
4-tert-Butylbenzoic acid	Not established	Not established	Not established	Not established		

Appropriate Engineering Controls

The hazard potential of this product is relatively low. General ventilation is usually adequate. Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Nitrile rubber.

Respiratory Protection

Not normally required if product is used as directed. For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Available in these colours: Clear, Yellow, Gold, Red, Blue, Green, Amber, Pink, Orange, Purple, White, Brown, Grey, Teal.
Odour	Odourless
Odour Threshold	Not available
pH	7.8 - 9.5
Melting Point/Freezing Point	-17 - -52 °C (1 - -62 °F) (melting); -17 - -52 °C (1 - -62 °F) (freezing)
Initial Boiling Point/Range	121 - 132 °C (250 - 270 °F)
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.05 - 1.12 at 20 °C
Solubility	Not available in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available

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Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Liquid
Molecular Weight	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

None known.

Incompatible Materials

Slightly reactive or incompatible with the following materials: oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide).

Not corrosive to metals.

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Ethylene glycol	2725 mg/m ³ (rat) (4-hour exposure)	1560 mg/kg Human - Male	9530 mg/kg (rabbit)
4-tert-Butylbenzoic acid	> 1802 mg/m ³ (rat) (4-hour exposure)	568 mg/kg (mouse)	300 mg/kg (mouse)

LC50: No information was located.

LD50 (oral): No information was located.

LD50 (dermal): No information was located.

Skin Corrosion/Irritation

Human experience and animal tests show mild irritation.

Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials. Symptoms include sore, red eyes, and tearing.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

At high concentrations as a mist nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Skin Absorption

At high concentrations may cause Symptoms may include redness, rash, swelling and itching.

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Ingestion

Toxic, can cause death based on information for closely related materials. depression of the central nervous system, and effects on the heart and kidneys. In some cases, there may be delayed effects on the nervous system. There are 3 stages of effects, which can overlap. Early symptoms can include upset stomach, slurred speech, clumsiness, drowsiness, and convulsions. Second stage symptoms can include rapid heartbeat and breathing, bluish lips and skin, fluid in the lungs and heart failure. In the last stage, there can be kidney stones and kidney damage with lower back pain, and increased then decreased urine production. There may be delayed nervous system effects such as paralysis of the face, clumsiness, impaired hearing and blurred vision. Death can occur at any stage.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis).
May cause Following skin contact and/or if swallowed: harmful effects on the kidneys.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Ethylene glycol	Not Listed	A4	Not Listed	Not Listed
4-tert-Butylbenzoic acid	Not Listed	Not designated	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

Studies in people and animals show effects on the unborn child.

Sexual Function and Fertility

Studies in people and animals show effects on sexual function and/or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

Other Information

TOXIC SUBSTANCE: KEEP AWAY FROM ANIMALS AND SMALL CHILDREN.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

Ecotoxicity

Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Ethylene glycol	39140 mg/L (Oncorhynchus mykiss (rainbow trout))		24000 mg/L (Daphnia magna (water flea))	
4-tert-Butylbenzoic acid	Not available		Not available	

Persistence and Degradability

No information was located.

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Bioaccumulative Potential

This product and its degradation products are not expected to bioaccumulate.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (Ethylene glycol)	9	III

Environmental Hazards Not applicable (Ethylene glycol)

Special Precautions Please note: In single containers of 5000 lbs capacity or less this product is exempt from DOT regulations (non regulated). Does not require label or placards. Regulated Quantity (RQ)= 5000 lbs (2268 kg) (as ethylene glycol) For bulk shipments equal to or greater than Regulated Quantity (RQ), please adhere to classification as outlined in DOT Classification section.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Proof of Dangerous Goods Classification

Date of Classification January 11, 2017
Technical Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID
Classification 9 PG III
Classification Method As per regulation for ethylene glycol.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65: WARNING: Birth Defects and other Reproductive Harm - www.P65Warnings.ca.gov/product.

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Custom Regulatory 1

Consumer Product Safety Improvement Act of 2008 General Conformity Certification

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product container.

SECTION 16. OTHER INFORMATION

SDS Prepared By Compliance and Regulatory Department
Phone No. 905-878-5544
Date of Preparation August 21, 2019
Date of Last Revision August 21, 2020
Revision Indicators Product Codes: 16-914, 16-919, 26-919, 26-919-1000, 86-914 have been reclassified on 21-Aug-19 to this SDS

The following SDS content was changed on October 21, 2019:
SECTION 1. IDENTIFICATION; Other Means of Identification; Other Identification.
The following SDS content was changed on August 21, 2020:
SECTION 1. IDENTIFICATION; Other Means of Identification.

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Additional Information We are committed to uphold the Industry Consumer Ingredient Communication Voluntary Initiative.
Please send us your request by visiting our website at www.recochem.com.

Ingredients present (intentionally added ingredients) at a concentration of greater than one percent (1%) shall be listed in descending order of predominance. Ingredients present at a concentration of not more than one percent shall be listed but may be disclosed without respect to order of predominance.

Disclaimer Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Antifreeze/Coolant

SECTION 1. IDENTIFICATION

Product Identifier	Antifreeze/Coolant
Other Means of Identification	16-104, 16-104GD, 16-104LAU, 16-174BOEMH, 16-174BOEMN, 16-174POEMT, 16-174YOEMK, 16-284LAU, 16-288LAU, 16-314, 16-314GD, 16-314GOEME, 16-314POEMVW, 16-374, 16-374GD, 16-374OOEMGM, 16-524, 16-525, 16-924, 26-109, 26-109LAU, 26-289LAU, 26-289LAU-1000, 26-319, 26-319-1000, 26-378-1000, 26-379, 26-529, 26-529-1000, 26-669, 26-669-1000, 26-669PC-1000, 26-929, 26-929-1000, 26-929PC, 36-104APREXP, 36-104AXEXP, 36-104C, 36-104CQ, 36-104FEDEXP, 36-104LOR, 36-104NAS, 36-104NAVEXP, 36-104PMEXP, 36-104PPEXP, 36-104PROFEXP, 36-104SO, 36-104SPROEXP, 36-104STP, 36-104STPXP, 36-104U/N, 36-109AXEXP, 36-109C, 36-109NAVEXP, 36-109SPROEXP, 36-109U/N, 36-114ECO, 36-174C, 36-174U/N, 36-244ALL, 36-244NAV, 36-244RC, 36-248RC, 36-284ALL, 36-284NAV, 36-284PWR, 36-284RC, 36-289PWR, 36-314SO, 36-314U/N, 36-315SO, 36-319SO, 36-374AXEXP, 36-374CQ, 36-374PMEXP, 36-374STP, 36-374STPEXP, 36-374TOT, 36-374U/N, 36-379AXEXP, 36-384ECO, 36-524FS, 36-924SH, 86-104OEM, 86-104OEMH, 86-109-1000, 86-109OEM, 86-174BOEM, 86-174POEM, 86-174ROEM, 86-314BOEME, 86-314POEMVW, 86-319, 86-374, 86-374GROEM, 86-374OEM, 86-374ROEM, 86-379, 86-379-1000, 86-524, 86-669, 86-669SHER, 86-924, BULK-16100, BULK-16100Y, BULK-16130, BULK-163700, BULK-16760, BULK-86100, BULK-86100Y, BULK-863700-M, 36-104PLP, 36-315COA, 36-319DOM, 36-109LSEXP, 36-109LSEXP-1K, 36-104COA, BULK-16300FCG, 26-319PH-1000, 26-379GRH-1000
Other Identification	Ethylene Glycol,
Recommended Use	Please refer to Product label.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	Recochem Inc., 850 Montee de Liesse, Montreal, QC, H4T 1P4, Compliance and Regulatory Department, 905-878-5544, www.recochem.com
Emergency Phone No.	CANUTEC, 613-996-6666, 24 Hours
SDS No.	1767

SECTION 2. HAZARD IDENTIFICATION

Classification

Acute toxicity (Oral) - Category 4; Specific target organ toxicity (repeated exposure) - Category 2

Label Elements



Signal Word:
Warning

Hazard Statement(s):

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H302 Harmful if swallowed.
H373 May cause damage to organs (kidneys) through prolonged or repeated exposure following skin contact and/or if swallowed.

Precautionary Statement(s):

Prevention:

P260 Do not breathe fume, mist, vapours, spray.
P264 Wash hands and skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
P330 Rinse mouth.
P314 Get medical advice/attention if you feel unwell.

Storage:

Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Ethylene glycol	107-21-1	80-100		

Notes

Use of Generic SDS:

If the concentration or actual concentration range of an ingredient of a particular hazardous product in the series is different from the concentration or actual concentration range disclosed for the rest of the series, either the concentration or the actual concentration range must be indicated beside that ingredient under item 3 (Composition/Information on ingredients) of the SDS. Furthermore, if any other specific information element(s) (such as flash point, numerical measure of toxicity, etc.) for a particular hazardous product in the series differs from that of the other products in the series (without affecting the classification), the information element relevant to that hazardous product must be disclosed on the SDS with an indication to which hazardous product each relates.

Source: Health Canada - Technical Guidance on the Requirements of the Hazardous Products Act and the Hazardous Products Regulations WHMIS 2015 Supplier Requirements - pg 117

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Call a Poison Centre or doctor if you feel unwell.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Call a Poison Centre or doctor if you feel unwell. Clean clothing, shoes and leather goods.

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Eye Contact

If eye irritation persists, get medical advice or attention. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water. Call a Poison Centre or doctor if you feel unwell.

Most Important Symptoms and Effects, Acute and Delayed

If swallowed: There are 3 stages of effects, which can overlap. Early symptoms can include upset stomach, slurred speech, clumsiness, drowsiness, and convulsions. Second stage symptoms can include rapid heartbeat and breathing, bluish lips and skin, fluid in the lungs and heart failure. In the last stage, there can be kidney stones and kidney damage with lower back pain, and increased then decreased urine production. There may be delayed nervous system effects such as paralysis of the face, clumsiness, impaired hearing and blurred vision. Death can occur at any stage.

Immediate Medical Attention and Special Treatment

Target Organs

Digestive system, nervous system, heart, digestive system, kidneys, skin.

Special Instructions

The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, central nervous system depression and kidney injury. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. Treatment with ethanol to inhibit the metabolism of glycol to oxalate. Early administration of ethanol may counter the toxic effects of ethylene glycol (cardiopulmonary effects attributed to metabolic acidosis and renal damage).

Hemodialysis or peritoneal dialysis have been of benefit. Pre-existing respiratory and skin disorders may be aggravated by over-exposure to this product. Treat symptomatically and supportively.

Medical Conditions Aggravated by Exposure

Dermatitis.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder or appropriate foam.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Can ignite if strongly heated.

In a fire, the following hazardous materials may be generated: irritating chemicals.

Special Protective Equipment and Precautions for Fire-fighters

Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.

See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may

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pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for Safe Storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Ethylene glycol	10 mg/m3	100 mg/m3	Not established	50 ppm		

Appropriate Engineering Controls

The hazard potential of this product is relatively low. General ventilation is usually adequate. Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Nitrile rubber.

Respiratory Protection

Not normally required if product is used as directed. For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Available in these colours: Clear, Yellow, Gold, Red, Blue, Green, Amber, Pink, Orange, Purple, White, Brown, Grey, Teal.
Odour	Odourless
Odour Threshold	Not available
pH	7.8 - 8.6 (100% solution)
Melting Point/Freezing Point	-13 °C (9 °F) (melting); -13 °C (9 °F) (freezing)

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Initial Boiling Point/Range	197 °C (387 °F)
Flash Point	~ 111 °C (232 °F) (closed cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	15.3% (upper); 3.2% (lower)
Vapour Pressure	0.008 kPa
Vapour Density (air = 1)	2.1
Relative Density (water = 1)	1.1150 - 1.1135 at 20 °C
Solubility	Not available in water; Soluble in all proportions in ketones (e.g. acetone).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); 21 mPa.s (dynamic)
Other Information	
Physical State	Liquid
Molecular Weight	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

None known.

Incompatible Materials

Slightly reactive or incompatible with the following materials: oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide).

Not corrosive to metals.

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Ethylene glycol	2725 mg/m ³ (rat) (4-hour exposure)	1560 mg/kg Human - Male	9530 mg/kg (rabbit)

LC50: Not applicable.

LD50 (oral): Not applicable.

LD50 (dermal): Not applicable.

Skin Corrosion/Irritation

Human experience and animal tests show mild irritation.

Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials. Symptoms include sore, red eyes, and tearing.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

At high concentrations as a mist nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Skin Absorption

At high concentrations may cause Symptoms may include redness, rash, swelling and itching.

Ingestion

Toxic, can cause death based on information for closely related materials. depression of the central nervous system, and effects on the heart and kidneys. In some cases, there may be delayed effects on the nervous system. There are 3 stages of effects, which can overlap. Early symptoms can include upset stomach, slurred speech, clumsiness, drowsiness, and convulsions. Second stage symptoms can include rapid heartbeat and breathing, bluish lips and skin, fluid in the lungs and heart failure. In the last stage, there can be kidney stones and kidney damage with lower back pain, and increased then decreased urine production. There may be delayed nervous system effects such as paralysis of the face, clumsiness, impaired hearing and blurred vision. Death can occur at any stage.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis).

May cause Following skin contact and/or if swallowed: harmful effects on the kidneys.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Ethylene glycol	Not Listed	A4	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

If swallowed: at high concentrations animal studies show effects on the offspring. Known to cause: decreased weight. Embryotoxic (late resorptions) teratogenic(external, soft tissue and skeletal defects) these effects are not considered relevant to occupational exposures.

Sexual Function and Fertility

Does not cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

Other Information

TOXIC SUBSTANCE: KEEP AWAY FROM ANIMALS AND SMALL CHILDREN.

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Ethylene glycol	18500 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour; fresh water)	74000 mg/L (Daphnia magna (water flea); 24 hr)		

Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Ethylene glycol	39140 mg/L (Oncorhynchus mykiss (rainbow trout))		24000 mg/L (Daphnia magna (water flea))	

Persistence and Degradability

No information was located.

Bioaccumulative Potential

This product and its degradation products are not expected to bioaccumulate.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (Ethylene glycol)	9	III

Environmental Hazards Not applicable

Special Precautions Please note: In single containers of 5000 lbs capacity or less this product is exempt from DOT regulations (non regulated). Does not require label or placards. Regulated Quantity (RQ)= 5000 lbs (2268 kg) (as ethylene glycol) For bulk shipments equal to or greater than Regulated Quantity (RQ), please adhere to classification as outlined in DOT Classification section.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Proof of Dangerous Goods Classification

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Date of Classification March 27, 2017
Technical Name not Regulated
Classification Not Regulated
Classification Method As per regulation for ethylene glycol.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)
All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)
All ingredients are listed on the TSCA Inventory.
Additional USA Regulatory Lists
California Proposition 65: WARNING: Birth Defects and other Reproductive Harm -
www.P65Warnings.ca.gov/product.

Custom Regulatory 1

Consumer Product Safety Improvement Act of 2008 General Conformity Certification

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product container.

SECTION 16. OTHER INFORMATION

SDS Prepared By Compliance and Regulatory Department
Phone No. 905-878-5544
Date of Preparation March 27, 2017
Date of Last Revision September 01, 2020
Revision Indicators The following SDS content was changed on February 02, 2018:
SECTION 1. IDENTIFICATION; Other Means of Identification.
The following SDS content was changed on April 16, 2019:
SECTION 1. IDENTIFICATION; Other Means of Identification.
The following SDS content was changed on May 06, 2019:
SECTION 1. IDENTIFICATION; Other Means of Identification.
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SECTION 1. IDENTIFICATION; Other Means of Identification.
The following SDS content was changed on May 13, 2019:
SECTION 1. IDENTIFICATION; Other Means of Identification.
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SECTION 1. IDENTIFICATION; Other Means of Identification.
The following SDS content was changed on February 26, 2020:
SECTION 1. IDENTIFICATION; Other Means of Identification.
The following SDS content was changed on September 01, 2020:
SECTION 1. IDENTIFICATION; Other Means of Identification.
References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
Additional Information We are committed to uphold the Industry Consumer Ingredient Communication Voluntary Initiative.
Please send us your request by visiting our website at www.recochem.com.

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Ingredients present (intentionally added ingredients) at a concentration of greater than one percent (1%) shall be listed in descending order of predominance. Ingredients present at a concentration of not more than one percent shall be listed but may be disclosed without respect to order of predominance.

Disclaimer

Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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