



Safety Data Sheet

SECTION 1 IDENTIFICATION

Product Name: Spectro® Year-Round Coolant

Product Code: YR

Product Use: Antifreeze

Restrictions on Use: Use only as directed

Manufacturer:

Intercontinental Lubricants Corp / Spectro Oils of America
993 Federal Road
Brookfield, CT 06804
(203) 775-1291 Fax: (203) 775-8720

Emergency Phone (Infotrac): 1 (800) 535-5053 (US and Canada)
1 (352) 323-3500 (International)

SDS Date of Preparation: 10/02/17

SECTION 2 HAZARDS IDENTIFICATION

Classification:

Physical	Health
Not Hazardous	Acute Toxicity Category 4 Specific Target Organ Toxicity – Repeated Exposure Category 2

Label Elements:

Warning!



H302 Harmful if swallowed.

H373 May cause damage to kidneys through prolonged or repeated exposure.

Prevention:

P260 Do not breathe mist or vapors.

P264 Wash exposed skin thoroughly after handling.

P270 Do not eat, drink, or smoke when using this product.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.

P330 Rinse mouth.

Disposal:

P501 Dispose of contents and container in accordance with local and national regulations.

SECTION 3: PRODUCT COMPONENTS

Chemical Name	CAS#	Concentration
Ethylene Glycol	107-21-1	40-60
Diethylene Glycol	111-46-6	<2
Inhibitor Package and Water	Mixture	40-60

The specific identity and/or exact percentage has been withheld as a trade secret.

SECTION 4: FIRST AID PROCEDURES

Eye Contact: Immediately flush eye with water for at least 15 minutes while lifting the upper and lower lids. Get medical attention.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if irritation develops.

Inhalation: Remove victim to fresh air if ill effects occur and get medical attention.

Ingestion: Do not induce vomiting. Get immediate medical attention by calling a Poison Control Center or hospital emergency department.

Most important symptoms/effects, acute and delayed: May cause mild eye irritation. Prolonged skin contact may cause irritation. Excessive inhalation of vapor or mists may cause upper respiratory tract irritation and central nervous system effects. Swallowing may cause nausea, vomiting and diarrhea.

Indication of immediate medical attention and special treatment, if necessary: None required under normal conditions of use.

Notes to Physician: The principal toxic effects of ethylene glycol, when swallowed, are kidney damage and metabolic acidosis. Ethanol is antidotal and its early administration may block the formation of nephrotoxic metabolites of ethylene glycol in the liver. The objective is to rapidly achieve and maintain a blood ethanol level of approximately 100 mg/dl by giving a loading dose of ethanol followed by a maintenance dose. Intravenous administration of ethanol is the preferred route. Hemodialysis may be required. 4-Methylpyrazole, a potent inhibitor of alcohol dehydrogenase, has been used therapeutically to decrease the metabolic consequences of ethylene glycol poisoning. Additional therapeutic modalities which may decrease the adverse consequences of ethylene glycol metabolism are the administration of both thiamine and pyridoxine. Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. Respiratory support with mechanical ventilation may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth, and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphagia.

SECTION 5 FIRE and EXPLOSION HAZARD DATA

Suitable extinguishing media: Water fog, alcohol foam, carbon dioxide, dry chemical.

Specific hazards arising from the chemical: Heated vapors may form explosive mixtures with air. Thermal decomposition may yield carbon monoxide and carbon dioxide.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus. Cool exposed intact containers with water. Do not use a direct stream of water.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective equipment.

Environmental hazards: Avoid release into the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Dike spill and collect into closable containers for disposal with an inert absorbent. Prevent entry in storm sewers and waterways.

SECTION 7 HANDLING and STORAGE

Precautions for safe handling: Avoid eye and prolonged/repeated skin contact. Do not drink antifreeze or solutions. Wash thoroughly after handling. Do not eat, drink or smoke while using this product. Use only with adequate ventilation. Keep away from excessive heat or open flames. Remove contaminated clothing and launder before re-use. Discard contaminated shoes and other items that cannot be laundered.

Empty containers retain product residues. Do not cut, weld, braze, etc. on or near empty containers. Follow all SDS precautions in handling empty containers.

Conditions for safe storage, including any incompatibilities: Protect containers from physical damage. Store in a cool, well ventilated area.

SECTION 8 EXPOSURE CONTROLS and PERSONAL PROTECTION

Exposure Guidelines:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Exposure Limits</u>
Ethylene Glycol (aerosol)	107-21-1	25 ppm TWA, 50 ppm STEL (vapor), 10 mg/m ³ (inhalable fraction and vapor of the aerosol) ACGIH TLV
Diethylene Glycol Inhibitor Package and Water	111-46-6 Mixture	None Established
		None Established

Appropriate engineering controls: Good general room ventilation (equivalent to outdoors) should be adequate under normal conditions. If the recommended exposure limit is exceeded increased mechanical ventilation such as local exhaust may be required.

Respiratory Protection: None needed under normal use conditions with adequate ventilation. If the TLV is exceeded use a NIOSH approved respirator with organic vapor cartridges and a particulate pre-filter (R or P series). For higher concentrations (greater than 10 times the TLV) a NIOSH approved supplied air respirator (with escape bottle if required) or self-contained breathing apparatus may be required. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

Skin protection: Chemical resistant gloves such as neoprene or PVC are recommended where prolonged or repeated skin contact is likely.

Eye protection: Safety glasses or goggles recommended.

Other: Impervious apron, boots and other clothing are recommended if needed to avoid prolonged/repeated skin contact. Suitable washing facilities should be available.

SECTION 9 PHYSICAL and CHEMICAL PROPERTIES

Appearance: Blue- liquid

Odor: Mild odor

Odor threshold: Not available	pH: Not available
Melting point/Freezing Point: -46°F (-43.3°C)	Boiling Point: 302°F (112.8°C)
Flash point: Not flammable	Viscosity:
Flammability (solid, gas): Not applicable	
Flammable limits: LEL: 3.2 ethylene glycol)	UEL: 15.3 (ethylene glycol)
Vapor pressure: Not available	Vapor density (air =1): Not available
Relative density: 1.08	Solubility(ies): Completely in Water
Partition coefficient: n-octanol/water: Not available	Auto-ignition temperature: Not available
Decomposition temperature: Not available	Evaporation rate: <1

SECTION 10 STABILITY and REACTIVITY

Reactivity: This product is not expected to react.

Chemical stability: This material is stable.

Possibility of hazardous reactions: Normally unreactive, however, avoid strong bases at high temperatures.

Conditions to avoid: Avoid excessive heat.

Incompatible materials: Avoid strong bases, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

Hazardous decomposition products: Thermal decomposition may yield carbon monoxide and carbon dioxide.

SECTION 11 TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:

Inhalation: May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations may produce nausea, vomiting, headache, dizziness and irregular eye movements.

Skin Contact: No significant irritation is expected.

Eye Contact: Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated.

Ingestion: May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning.

Chronic Effects of Overexposure: Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined. See section 11 for additional information.

Sensitization: None of the components have been found to cause sensitization in animals or humans.

Mutagenicity: None of the components have been found to cause mutagenic activity.

Reproductive Toxicity: Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations 150, 1,000 and 2,500 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentrations, but only in mice. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen; there is currently no available information to suggest that ethylene glycol caused birth defects in humans.

Carcinogenicity: None of the components of this product are listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.

Acute Toxicity Values:

Ethylene Glycol: LD50 Oral Rat: 4700 mg/kg, LD50 Skin Rabbit: 9530 mg/kg
Diethylene Glycol: LD50 Oral Rat: 12,565 mg/kg, LD50 Skin Rabbit: 11,890 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Ethylene Glycol: LC50 Goldfish: 5,000 mg/L/24 hr. at 20 C static conditions.
Toxicity threshold (cell multiplication inhibition test): Bacterial (*Pseudomonas putida*): 10,000 mg/l, Protozoa (*Entosiphon sulcatum* and *Uronema parduczi* Chatton-Lwoff): >10,000 mg/l, Algae (*Microcystis aeruginosa*): 2,000 mg/l, Green algae (*Scenedesmus quadricauda*): >10,000 mg/l
Diethylene Glycol: LC50 Goldfish: 5,000 mg/L/24 hr. at 20 C static conditions.

Persistence and degradability: Ethylene glycol and diethylene glycol are readily biodegradable.

Bioaccumulative potential: Ethylene glycol has a BCF of 10. Diethylene glycol has a BCF of 3. This suggest the potential for bioaccumulation is low.

Mobility in soil: Ethylene glycol and diethylene glycol are highly mobile in soil.

Other adverse effects: None known.

SECTION 13: DISPOSAL INFORMATION

Waste Disposal Method: Dispose in accordance with all local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT		Not Regulated			
TDG		Not Regulated			
IMDG		Not Regulated			
IATA		Not Regulated			

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known.

SECTION 15: REGULATORY INFORMATION

Safety, health, and environmental regulations specific for the product in question.

CERCLA: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (60% maximum) of 5,000 lbs, is 8,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA SARA 302: This product does not contain chemicals regulated under SARA Section 302.

EPA SARA 311 Hazard Classification: Refer to Section 2 for OSHA Hazard Classification

EPA SARA 313: This product contains the following chemicals that are regulated under SARA Title III, section 313:

Ethylene Glycol	107-21-1	40-60%
-----------------	----------	--------

Toxic Substances Control Act: All of the components of this product are listed on the TSCA inventory.

California Proposition 65: This product contains the following chemicals which known to the State of California to cause cancer or reproductive harm.

Ethylene Glycol	107-21-1	40-60%	developmental
-----------------	----------	--------	---------------

Canada: All of the components of this product are listed on the Canadian Domestic Substances List (DSL).

SECTION 16: OTHER INFORMATION

NFPA Rating: Health: 1 Fire: 1 Reactivity: 0

Revision Summary:

7/27/11: Format change to all sections; Section 3: Removed Propylene Glycol; Section 8: Removed Propylene Glycol; Section 11: Removed Propylene Glycol; Section 12: Added ecological information; and Section 16: Added revision summary.

4/24/15: Revised to GHS format – all sections revised.

10/02/17: Header, Section 1 Emergency Phone Number, Section 8 Occupational Exposure, Section 15 SARA 311, California Proposition 65