

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Directives



1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): Anti-Freeze HD 50/50
SYNONYMS: Anti-freeze
CHEMICAL SHIPPING NAME/CLASS: Non-regulated Material
U.N. NUMBER: None
MANUFACTURER'S NAME: Emerald Services, Inc.
ADDRESS: 1825 Alexander Ave., Tacoma, WA 98421 USA
EMERGENCY PHONE: (800) 424-9300 (CHEMTREC - #7619)
BUSINESS PHONE: (206) 832-3225
DATE OF PREPARATION: June 26, 2006
DATE OF REVISION: December 5, 2011

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Danger!

Product Description: This product is a green or fuchsia liquid with a characteristic odor.

Health Hazards: Harmful if swallowed. Can cause eye, skin and respiratory system irritation.

Flammability Hazards: Combustible liquid above flash point of 128°C (262°F)

Reactivity Hazards: This product is not reactive.

Environmental Hazards: Release of the product may cause adverse effects to the aquatic environment.

Emergency Recommendations: Emergency responders must have personal protective equipment and fire protection appropriate for the situation to which they are responding.

EU LABELING AND CLASSIFICATION: This product meets the definition of a hazardous substance or preparation according to EU Regulations (EC) No 1272/2008.

INDEX NUMBER:

EC# 203-473-3 Annex1 Index# 603-027-00-1

EC# 231-791-2 This substance is not listed in the Annex I of Regulation (EC) No 689/2008.

EC# 229-912-9 Annex 1 Index # 014-010-00-8

Phosphates - Various Not Listed in ESIS

CAS# 12179-04-3 found in CLP/GHS Annex VI to Regulation (EC) No 1272/2008.

EC# 231-554-3 This substance is not listed in the Annex I of Regulation (EC) No 689/2008.

EC# 215-185-5 Annex 1 Index # 011-002-00-6

EC# 215-181-3 Annex 1 Index # 019-002-00-8

Proprietary Ingredient not listed in ESIS

GHS CLASSIFICATIONS:

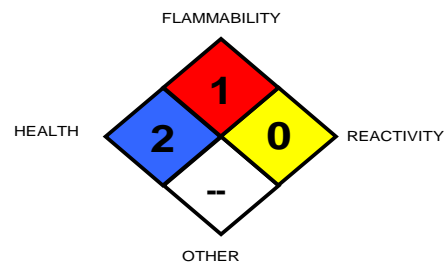
Acute Ingestion Toxicity Category 4

Skin Corrosive Category 2

SIGNAL WORD : Warning !



HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD (BLUE)		2	
FLAMMABILITY HAZARD (RED)		1	
REACTIVITY (YELLOW)		0	
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			



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HAZARD STATEMENT:

H302 Harmful if swallowed
H315 Causes skin irritation
H335 May causes respiratory irritation

PREVENTION STATEMENT :

P233 Keep container tightly closed.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash skin thouroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or Doctor/Physician.

RESPONSE STATEMENT:

P363 Wash contaminated clothing before reuse.
P302 +P352 IF ON SKIN: Wash with plenty of soap and water.

HEALTH EFFECTS OR RISKS FROM EXPOSURE:

ACUTE:

INHALATION: High concentrations of vapors/mists may be irritating to the respiratory tract.

SKIN: Prolonged or repeated contact may cause irritation;

EYES: Contact may cause irritation and discomfort.

INGESTION: Ingestion may cause effects on the kidneys and central nervous system, resulting in renal failure and brain injury.

CHRONIC: This substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus). This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients:	WT%	CAS#	EINECS #	Hazard Classification	Risk Phrases
1,2 Ethanediol	51 - 52%	107-21-1	203-473-3	[Xn] Harmful	R22
Distilled Water	47 - 48%	7732-18-5	231-791-2	None	None
Sodium Metasilicate	0.1 – 0.2%	6834-92-0	229-912-9	[Xi] Irritant	R37
Phosphates	0.2 – 0.5%	Various	Not Listed in ESIS	[Xi] Irritant	R36/38
Sodium Borate Decahydrate	0.2 – 0.5%	12179-04-3	Not Listed in ESIS	[Xi] Irritant	R36/38
Sodium Nitrate	0.2 – 0.5%	7631-99-4	231-554-3	[Xi] Irritant	R36/38
Sodium Hydroxide	0.5 – 1.0%	1310-73-3	215-185-5	[Xi] Irritant	R36/38
Potassium Hydroxide	0.2 – 0.5%	1310-58-3	215-181-3	[Xi] Irritant	R36/38
Sodium Tolytriazole	0.05 - 0.2%	Proprietary	Not Listed in ESIS	[Xi] Irritant	R36/38
Dye	0.005%	Not Assigned	Not Listed In ESIS	None	None
Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

4. FIRST-AID MEASURES

SKIN EXPOSURE: If this product contaminates the skin, begin decontamination with running water. Minimum flushing is for 5 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual should seek medical attention if any adverse effect occurs.

EYE EXPOSURE: If this product enter the eyes, open contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Remove contact lenses if worn. Have contaminated individual "roll" eyes. Minimum flushing is for 15 minutes. Contaminated individual must seek medical attention if irritation develops or persists or if visual changes occur.

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INHALATION: If vapors/mists generated by this product are inhaled, remove contaminated individual to fresh air. If necessary, use artificial respiration to support vital functions. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT induce vomiting; if vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. SEEK IMMEDIATE MEDICAL ATTENTION.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing skin and respiratory conditions may be more susceptible to effects of this material.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 262°F (128°C)

AUTOIGNITION TEMPERATURE: Not Established

FLAMMABLE LIMITS (in air by volume, %): Lower 3.2% Upper 15.3%

FIRE EXTINGUISHING MATERIALS: Use fire extinguishing methods listed below:

Water Spray: Yes

Carbon Dioxide: Yes

Foam: Yes

Dry Chemical: Yes

Halon: Yes

Other: Any "C" Class

Note: Water or foam may cause frothing. Use water to disperse the vapors and provide protection for persons attempting to stop spill or leak.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers can explode due to buildup of pressure when exposed to extreme heat.

Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Evacuate unprotected personnel from the area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in section 8. Contain and recover liquid if possible. Use non-sparking tools and equipment. Cover or absorb spilled liquid with sand, earth or other inert material. Clean up spill immediately and place in appropriate containers. Do not discharge to sewers and surface waters. Notify authorities if entry occurs. Remove all sources of ignition.

U.S. Regulations (CERCLA) requires reporting spills and releases to soil, water and air in excess of reportable quantities.

The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing.

STORAGE AND HANDLING PRACTICES: Protect against physical damage. Store in a cool, dry well-ventilated location away from heat or ignition sources. Keep out of direct sunlight. Keep containers tightly closed. Observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Chemical Name	CAS#	ACGIH TLV	OSHA TWA
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1,2 Ethanediol	107-21-1	100 mg/m ³	Not Listed
Distilled Water	7732-18-5	Not Listed	Not Listed
Sodium Metasilicate	6834-92-0	Not Listed	Not Listed
Phosphates	Various	Not Listed	Not Listed
Sodium Borate Decahydrate	12179-04-3	5 mg/m ³	Not Listed
Sodium Nitrate	7631-99-4	Not Listed	Not Listed
Sodium Hydroxide	1310-73-3	2 mg/m ³	2 mg/m ³
Potassium Hydroxide	1310-58-3	2 mg/m ³	Not Listed
Sodium Tolytriazole	Proprietary	Not Listed	Not Listed
Dye	Not Assigned	Not Listed	Not Listed

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use a chemical fume hood or local exhaust ventilation, and process enclosure if necessary, to control exposure. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Use chemically-resistant gloves when handling this product. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate for task (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

VAPOR DENSITY: 1.8

% VOLATILE: >50%

SOLUBILITY IN WATER: Soluble

VAPOR PRESSURE: 18 @ 20°C

ODOR: Characteristic

APPEARANCE and COLOR: Green or fuchsia liquid with a characteristic odor

EVAPORATION RATE (n-BuAc=1): No Data

MELTING/FREEZING POINT: Not Applicable

BOILING POINT: 325 - 333°C

pH: No Data

SPECIFIC GRAVITY: 1.065 – 1.075 @ 60°C

10. STABILITY and REACTIVITY

STABILITY: Stable under conditions of normal storage and use.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition produces carbon dioxide and carbon monoxide.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizing agents

POSSIBILITY OF HAZARDOUS REACTIONS: Will not occur.

CONDITIONS TO AVOID: Incompatible materials.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

CAS# 107-21-1

Emerald Services Inc.

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Oral rat LD50: 4700 mg/kg; skin rabbit LD50: 9530 uL/kg; Irritation data: eye rabbit, 500 mg/24H, Mild.

CARCINOGENICITY:

None of the components of this product are listed as a carcinogen or suspected carcinogen.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: This material will rapidly evaporate to the air if released onto the environment. No other data available at this time.

CHEMICAL EFFECT ON PLANTS, ANIMALS AND AQUATIC LIFE: No Data Available

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS: This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows:

This product is shipped as Non regulated by DOT when shipped in quantities less than 5,000 Lbs Ethylene Glycol.

For quantities in excess of 5,000 Lbs Ethylene Glycol

PROPER SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s. (Ethylene Glycol)

HAZARD CLASS NUMBER and DESCRIPTION: Class 9 Environmentally hazardous substance

UN IDENTIFICATION NUMBER: UN3082

PACKING GROUP: PGIII

DOT LABEL(S) REQUIRED: Class 9 Environmentally Hazardous

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER: 171

RQ QUANTITY: 5,000 Lbs

MARINE POLLUTANT: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is not considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not considered as dangerous goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act as follows:

This material contains Ethylene glycol CAS# 107-21-1 which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): CAS# 107-21-1: 5000 lb final RQ; 2270 kg final RQ.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory or are exempted from listing.

Clean Air Act:

CAS# 107-21-1 is listed as a hazardous air pollutant (HAP).

Clean Water Act:

None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Ingredients within this product are not on the Proposition 65 Lists.

CANADIAN REGULATIONS:

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CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory, or are exempted from listing.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: Class D Division 2A Materials causing serious toxic effects.



EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION: This product meets the definition of the following hazard class as defined by the European Economic Community Guidelines.

EU CLASSIFICATION: [Xn] Harmful, [Xi] Irritant

EU RISK PHRASES: R22: Harmful if swallowed; R36/37/38: Irritating to skin, respiratory system and eyes;

EU SAFETY PHRASES: S24/25: Avoid contact with skin and eyes. S46: If swallowed, seek medical advice immediately and show this container or label;



AUSTRALIAN INFORMATION FOR PRODUCT: The components of this product are listed on the International Chemical Inventory list.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

JAPANESE ENCS INVENTORY: The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

- Asia-Pac: Listed
- Australian Inventory of Chemical Substances (AICS): Listed
- Korean Existing Chemicals List (ECL): Listed
- Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
- Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed
- Swiss Giftliste List of Toxic Substances: Listed
- U.S. TSCA: Listed

16. OTHER INFORMATION

PREPARED BY: Paul Eigbrett – (**MSDS Authoring PLUS**)

DATE OF PRINTING: February 13, 2011

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. Emerald Services, Inc. assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, Emerald Services, Inc. assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

END OF MSDS SHEET