

MATERIAL SAFETY DATA SHEET

Version: August 16, 2007

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Used Antifreeze**
SUPPLIER:
Atlantic Industrial Services, Inc.
6600 NW 12TH AVENUE, SUITE 205
FORT LAUDERDALE, FL 33309

Product and MSDS Information: (800) 256-9900 or (318) 688-1191

CHEMTREC: (800) 424-9300 or (202) 483-7616

2. MATERIAL INFORMATION

Identity: USED ANTIFREEZE/COOLANT
Synonyms: AUTOMOTIVE COOLANT; ETHYLENE GLYCOL SOLUTION; ENGINE COOLING FLUID
Family Chemical Name: GLYCOLS AND GLYCOL COMPOUNDS
NFPA Rating (scale 0-4): 1-HEALTH 0-FIRE 0-REACTIVITY
MSDS Form No: USED ANTIFREEZE 8-16-07

3. HAZARDS IDENTIFICATION

This material is a solution of ethylene and diethylene glycols with water and stabilizing additives – usually complex salts.

<u>TYPICAL INGREDIENTS:</u>	<u>TYPICAL VOLUME %:</u>	<u>CAS NUMBER:</u>
Ethylene Glycol	40-60	107-21-1
Diethylene Glycol	0-2.5	111-46-6
Tolytriazole, Sodium salt	0.0-<0.25	64665-57-2
Water	40-60	7732-18-5

EXPOSURE LIMITS IN AIR

OSHA TLV – TWA (ppm)	50
OSHA TLV – STEL (ppm)	50

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with large amounts of water for a minimum of 15 minutes. If redness or irritation is present, continue flushing until the irritation subsides. If the material is hot, seek medical attention immediately for thermal burns.

SKIN CONTACT: Wash contact area with soap and water. If clothing is contaminated, minimize contact time on skin by removing contaminated clothing (if applicable) and washing contact area thoroughly with soap and water. If material is hot, flush or submerge affected area in cold water, and seek medical attention immediately for thermal burns. Seek medical attention if contact dermatitis

and/or surface irritation occurs.

INHALATION: This material is of low vapor pressure and is not expected to present an inhalation exposure hazard at ambient conditions. If exposure to vapor does occur, remove victim to fresh air immediately. If breathing is difficult, give oxygen until victim's respiration rate returns to normal, and seek immediate medical attention.

INGESTION: Call a physician immediately. Induce vomiting by administering ipecac or follow physician's instructions. **NOTE:** if available, ethanol may be administered *in very small quantities* as an antidote; if the victim becomes pale and weak, cease administration immediately. Get victim to a hospital as soon as possible.

5. FIRE PROTECTION & FIRE-FIGHTING MEASURES

FLASH POINT: 240 – 250 F (lowest component) **TEST METHOD:** TAG Closed Cup

AUTOIGNITION TEMP: 750 F (lowest component)

FLAMMABLE LIMITS IN AIR (% by vol): LOWER: 1.5 (lowest component) UPPER: 15.3

FLAMMABILITY CLASSIFICATION: Class IIIB

EXTINGUISHING MEDIA: Use Dry Chemical, Foam, or Carbon Dioxide (CO₂) NFPA Class IIIB Fire Extinguishers.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective on fire, but can be used to cool firefighting personnel and to cool containers exposed to heat or flame. Use high-velocity fog nozzles if water is used. Do not enter confined fire space without full bunker gear: helmet with face shield, bunker coats, gloves and rubber boots.

SPECIAL PROTECTIVE EQUIPMENT: Use Self-Contained Breathing Apparatus (SCBA) in enclosed areas.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers at the fire site may rupture and explode when exposed to heat. Use caution when closed, heated containers are present.

NFPA HAZARD ID:

Health: 1

Flammability: 1

Reactivity: 0

HAZARDOUS COMBUSTION PRODUCTS: Carbon Dioxide and Carbon Monoxide may be generated as products of combustion.

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Immediately contact and notify local safety personnel, including, but not limited to the local Fire Department and/or Police Department. **STAY CALM** at all times. In addition, contact the US Coast Guard National Response Center at 1-800-424-8802 if a spill of any amount is made into or upon U.S. navigable waterways, contiguous waterways, drainage ways, and/or adjoining shorelines.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Contain spill immediately. If possible, do not allow spill to enter sewers or watercourses. Remove all sources of heat and ignition. Immediately apply an absorbent material such as sand, clay, diatomaceous earth, vermiculite, etc. to the spilled area. Large, voluminous spills should be diked far ahead so they may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

ENVIRONMENTAL PRECAUTIONS: Disposal of collected material must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste – refer to state and local regulations.

Materials should be recycled if possible.

PERSONAL PRECAUTIONS: Refer to section 3 (Hazards Identification), section 4 (First Aid Measures), section 8 (Exposure Controls / Personal protection) and section 11 (Health Hazard Information) for necessary information.

7. HANDLING AND STORAGE

HANDLING: Always keep away from sources of heat or flame, incompatible materials (e.g., oxidizers and strong acids), foodstuffs and personal effects.

STORAGE: Store in closed containers away from sources of heat and oxidizing chemicals. Do not store in, or transfer material to, unmarked containers. Always maintain Class IIIB fire extinguishers & keep readily available wherever this material is stored. See NFPA 30 and OSHA 1910.106 – Flammable and Combustible Liquids.

This material is not classified as hazardous under DOT regulations unless transported in bulk quantities of 3500 gallons or greater.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Adequate ventilation in accordance with Good Engineering Practice must be provided to maintain concentrations below the specified exposure or flammable limits. Local exhaust recommended near heated product.

RESPIRATORY PROTECTION If mist or aerosol is present, use a NIOSH-approved organic-vapor respirator with an organic mist filter.

EYE PROTECTION: Wear protective goggles with chemical-proof safety lenses or a chemical-resistant face shield. Eye protection should meet the requirements of 29 CFR 1910.133 (OSHA eye and face protection regulations).

SKIN PROTECTION: For prolonged and/or repeated exposures, wear impervious clothing (e.g., boots, gloves, aprons, smocks, etc.) over parts of the body subject to exposure. For hand protection, wear latex, nitrile rubber, neoprene or equivalent gloves to prevent contact with the skin. All clothing should be properly laundered in hot water & detergent to remove traces of material. If clothing is disposable, overly contaminated or cannot be decontaminated properly (i.e., leather articles, including shoes), these should be properly disposed of in closed appropriate containers.

OTHER HYGIENIC AND WORK PRACTICES: Never eat, drink, or smoke when handling this material. Practice good personal hygiene and cleanliness procedures after using this material, especially before eating, drinking, smoking, applying cosmetics or skin preparations, and using the toilet.

EXPOSURE LIMITS: Caution should be exercised to not exceed the exposure limits listed in section (3) of this document.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Slightly viscous liquid, oily to the touch.
COLOR: Yellow-green to dark green; some brands may vary in color (e.g. pink-red)
ODOR: mild, non-offensive
pH: range of 9.0 -11.0
BOILING RANGE, C (F): 77-79C (170-175 F)
MELTING POINT C(F): N/A
FLASH POINT C (F): 115-121 C (240-250 F)
VAPOR PRESSURE-mmHg 20 C: 0.08
VAPOR DENSITY: 2.1 (Air=1)
EVAPORATION RATE: > 5 (Ether=1)
DENSITY: 9.3 Lbs/Gal
SPECIFIC GRAVITY, 60F: 1.1 to 1.2
API GRAVITY, 60 F: N/A
SOLUBILITY IN WATER: 100% (very soluble)
POUR POINT C (F): -12 C (10 F)
FREEZING POINT C (F): < -15 C (5 F)
VOLATILE ORGANIC COMPOUNDS: 97-99% (by vol)
REFRACTIVE INDEX: 1.43 +/- 0.01
WATER ABSORPTION: Very High
ACID ABSORPTION: Very High (85% H₂SO₄)

Note: N/A=NOT APPLICABLE; NE=NOT ESTABLISHED

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable
CONDITIONS TO AVOID: Keep away from sources of heat and flame.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong Oxidizers (e.g., peroxide compounds, chromates and permanganates)
HAZARDOUS DECOMPOSITION PRODUCTS: No decomposition products under normal product conditions. Under certain conditions of combustion carbon monoxide may be produced.
HAZARDOUS POLYMERIZATION: Will not occur.

11. HEALTH HAZARD INFORMATION

ACUTE SYMPTOMS OF EXPOSURE

INHALATION: Under normal exposure conditions, may cause systemic irritation of the nose and throat with accompanying headache. In a highly concentrated vapor environment, exposure may additionally produce nausea, vomiting, dizziness, severe headaches, and possibly unconsciousness.

SKIN: Prolonged and/or repeated exposure may cause mild skin irritation to sensitive individuals, including redness, burning, temporary drying/cracking, and dermatitis. Contact with hot material may cause thermal burns.

EYES: Contact may cause slight to moderate irritation, including burning, redness, and tearing. Contact with hot material may cause thermal burns.

INGESTION: MAY BE FATAL IF SWALLOWED. May cause abdominal pain, dizziness, malaise, lumbar pain, oliguria, uremia, and CNS depression. **Severe kidney damage, and subsequent renal collapse and failure, follows the ingestion of large volumes of ethylene glycol.**

CHRONIC SYMPTOMS OF EXPOSURE

INHALATION: Prolonged exposure to vapor may lead to severe pulmonary distress, including pneumonia, emphysema and possible pulmonary idiopathic fibrosis.

SKIN: Cracking, drying and chronic dermatitis with sensitive individuals. In most cases, no evidence of adverse effects on the skin should occur with proper personal protection

EYES: Possible transient conjunctivitis. Serious corneal injury is not anticipated.

12. STATEMENT OF CARCINOGENICITY

OSHA, NTP or IARC lists no ingredients in this material as suspected carcinogens.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Disposal of collected material must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste – refer to federal, state and local regulations for regulated waste transport and disposal.

14. TRANSPORT INFORMATION

USA DOT: This material is not classified as hazardous under DOT regulations unless transported in bulk quantities of over 3500 gallons.

15. REGULATORY INFORMATION

Governmental Inventory Status (TSCA): Components of this material are listed in the TSCA Inventory.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This material contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and 40 CFR Part 372: **ETHYLENE GLYCOL.**

HAZARDOUS CLASSIFICATION: This material meets the following hazard definition as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR 1910.1200): **HEALTH HAZARD (Section VI)**

SARA (311/312) REPORTABLE HAZARD CATEGORIES:

Immediate (Acute) Health Effects: YES

Delayed (Chronic) Health Effects: NO

Fire Hazard: YES - SLIGHT

Sudden Release of Pressure Hazard: NO

Reactivity Hazard: NO

STATE OF CALIFORNIA REPORTING REQUIREMENTS: This material does not appear in the California State Health and Safety Code, section 2549.5 (California Prop. 66: Listing of Chemicals Under the Act).

California Prop. 65: This material may contain chemicals known to the State of California to cause cancer. (See also section 11 (Health Hazard Information) and section 12 (Statement of Carcinogenicity)).

16. OTHER INFORMATION

USE: Automotive fluids coolants

Legally required information is given in accordance with applicable regulations. Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as recommendation for uses, which infringe valid patents, or as extending any license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users. Use or re-transmission of the information contained herein in any other format than the format as presented is strictly prohibited. AISI neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.