

## Environol 1000 & 2000 Safety Data

WaterFurnace International urges the customer receiving this Material Safety Data to study it carefully to become aware of potential hazards of the Environol product. In the interest of safety, you should:

- 1) Notify your employees, agents and contractors of the information in the following sections.
- 2) Furnish a copy to each of your customers to inform their employees and customers as well. Additional copies of this catalog are available upon request.

## Material Safety Data Sheet Section I - Identification

Product Name: Environol (Formulas 1000 or 2000)  
Synonyms: Special Industrial Solvent, Ground Source Heat Transfer Fluid  
Chemical Family: Alcohol

## Material Safety Data Sheet Section II - Ingredients

### Formula 1000

Composition	Cas.RN	Nominal Wt/Wt%	PEL/TLV	Hazard
Ethanol	64-17-5	21.4	1000ppm	Flammable/Nervous System Depressant
Water	7732-18-5	75.6		
Other Ingredients	Mixtures	<0.2		
FD&C Blue		2 ppm		

### Formula 2000

Composition	Cas.RN	Nominal Wt/Wt%	PEL/TLV	Hazard
Ethanol	64-17-5	92.14	1000ppm	Flammable/Nervous System Depressant
Water	7732-18-5	7.56		
Other Ingredients	Mixtures	<0.2		
FD&C Blue		5 ppm		

## Material Safety Data Sheet Section III - Health Information

### Inhalation

Exposure to over 1000 ppm may cause headache, drowsiness and lassitude, loss of appetite, sore throat, and inability to concentrate.

### Ingestion

Ingestion can cause depression of central nervous system, nausea, vomiting, and diarrhea.

### Eye Contact

Liquid or vapor may irritate the eyes.

### Skin Contact

May cause irritation and defatting of the skin on prolonged contact.

**24 Hour  
Emergency  
Assistance:  
Chemtrec  
1-800-424-9300**

## Material Safety Data Sheet Section IV - Emergency First Aid Procedures

### Swallowing

If the victim is conscious and able to swallow, have the victim drink water or milk to dilute. Never give anything by mouth if the victim is unconscious or is having convulsions. Call a physician or Chemtrec Poison Control Immediately. Induce vomiting only if advised by a physician or Chemtrec.

### Inhalation

Immediately move victim to fresh air. If victim has stopped breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.

### Contact With Eyes or Skin

Immediately flush affected area with cool water. Eyes should be flushed for at least 15 minutes. Remove and wash contaminated clothing. Seek medical attention immediately.

## Material Safety Data Sheet Section V - Physical Data

Environol 1000		Environol 2000	
Boiling Point:	188°F	Boiling Point:	173°F
Freezing Point:	6.8°F	Freezing Point:	-256°F
Vapor Pressure:	44.6 mm Hg @ 68°F	Vapor Pressure:	400 mm Hg @ 68°F
Specific Gravity:	.97 @ 60°/60°F	Specific Gravity:	.82 @ 60°/60°F
Vapor Density (Air=1):	1.59	Vapor Density (Air=1):	1.59
Solubility in Water:	Soluble	Solubility in Water:	Soluble
Appearance:	Light Blue	Appearance:	Light Blue

## Material Safety Data Sheet Section VI - Fire and Explosion Hazards

Flash Point: 62°F ASTM D-56 (Tag Closed Cup)

Auto-Ignition Temperature: 685°F

Flammable Limits in Air, % by Volume: Lower: 3.3 Upper: 19

NFPA (National Fire Protection Association) Rating: Health (0) Fire (3) Reactivity (0)

*(Does not apply to exposure hazards other than during a fire.)*

### Fire Fighting Procedures

(Note: Individuals should perform only those firefighting procedures for which they have been trained.) Use only dry chemical, "alcohol" foam, or carbon dioxide; water may be ineffective, but should be used to keep fire-exposed containers cool. If a leak or spill has not ignited, use a water spray to disperse the vapors and in accordance with MSDS Section VII Reactivity, protect persons attempting to stop a leak. Water spray may be used to flush spills away from exposures and to dilute spills to nonflammable mixtures (NFPA-49 1991).

### Unusual Fire & Explosion Hazards

Firefighters should wear self-contained breathing apparatus in the positive pressure mode with a full face piece when there is a possibility of exposure to smoke, fumes, or hazardous decomposition products.

## Material Safety Data Sheet Section VII - Reactivity

### Stability

Generally stable.

### Hazardous Polymerization

Not likely.

### Conditions and Materials to Avoid

Contact with acetyl chloride and a wide range of oxidizing agents may react violently.

## Material Safety Data Sheet Section VIII - Employee Protection

### Control Measures

Handle in the presence of adequate ventilation.

### Respiratory Protection

Where exposure is likely to exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of containment in air and in accordance with OSHA (29 CFR 1910.134).

### Protective Clothing

Wear gloves and protective clothing which are impervious to the product for the duration of the anticipated exposure if there is potential for prolonged or repeated skin contact.

### Eye Protection

Wear safety glasses meeting the specifications of ANSI Standard Z87.1 where no contact with the eye is anticipated. Chemical safety goggles meeting the specifications of ANSI Z87.1 should be worn whenever there is the possibility of splashing or other contact with the eyes.

## Material Safety Data Sheet Section IX - Environmental Protection

### Spill or Leak Procedures

Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill response plan should be developed and implemented.

Wear appropriate respiratory protection and protective clothing as described in Section VIII. Contain spilled material. Transfer to secure containers. Where necessary, collect using absorbent media. In the event of an uncontrolled release of this material, the user should determine if the release is reportable under applicable laws and regulations.

### Waste Disposal

All recovered material should be packaged, labeled, transported and disposed of, or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices.

## Material Safety Data Sheet Section X - Regulatory Controls

### Department of Transportation (DOT)

DOT Classification: Flammable Liquid

DOT Shipping Name: Ethanol Solution

Other DOT Information: Identification Number UN1170 Emergency Response Guide No. 26

### ATF Distilled Spirits Act

Use of ethyl alcohol without prior payment of applicable excise tax is strictly controlled by regulations promulgated and enforced by the Bureau of Alcohol, Tobacco, and Firearms (ATF). Governing regulations have been defined in Title 27, Code of Federal Regulations.

### Toxic Substance Control Act (TSCA)

This product is listed in the TSCA Inventory of Chemical Substances.

## MSDS Section XI - Precautions

### Handling, Storage and Usage

Protect container against physical damage. Detached or outside storage is recommended. Inside storage should be in a NFPA approved flammable liquid storage room or cabinet. All ignition sources should be eliminated. Smoking should be prohibited in storage areas. Electrical installations should be in accordance with Article 501 of the National Electrical Code. NFPA 30, Flammable and Combustible Liquids Code, should be followed for all storage and handling. Frequent careful leakage inspections are recommended. An automatic sprinkler system should be provided. Isolate from oxidizers, chemicals capable of spontaneous heating, materials reacting with air or moisture to liberate heat, ignition sources and explosives.

When contents are being transferred, the metallic container must be bonded to the receiving container and grounded to avoid static discharges. Never use pressure to empty. Replace closure carefully; internal pressure may be present. Keep closure on to prevent leakage.

**Container is hazardous when empty.** Since emptied containers retain residual product (vapor and liquid), all precautions described in this manual must be observed.

**Caution: For manufacturing, processing, repackaging, or industrial use — not for household use.** The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must conduct testing and/or make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees.