

**MATERIAL SAFETY DATA SHEET**

**PRODUCT INFORMATION**

Product Name: CALSOL 100  
General/Generic Name: DENATURED ALCOHOL  
Product Use: HEAT TRANSFER FLUID FOR GROUND SOURCE HEATING SYSTEMS  
TDG Hazard Classification: ALCOHOL, FLAMMABLE, TOXIC, N.O.S. (ETHANOL) CLASS 3 (6.1) UN 1987 PG II  
WHMIS Classification: FLAMMABLE LIQUID EYE IRRITANT  
Vendor Name & Address: HOOD CHEMICAL  
295 ALLIANCE ROAD #14  
MILTON ON L9T 4W8  
TEL: 905-876-0707

**HAZARDOUS INGREDIENTS**

Chemical Identity:	%W/W	CAS#	LD50	LC50
ETHANOL	60-100	64-17-5	Oral (Rat) 1501 mg/kg	Rat 124.7 mg/L
DENATORIUM	<0.1	3734-33-6	(Rat) 584 mg/kg	
PINE OIL	.25	8002-09-3	Oral (Rat) 3200 mg/kg	
FD& C BLUE DYE OR METHYLENE BLUE	>.1	3844-45-9	N.A	N.A N.A.
ALKYL DIMETHYLBENZYL AMONIUM CHLORIDE	>0.1	N.A	N.A	N.A N.A.
WATER	<0.1	8001-54-5	(Rat) 240 mg/kg	
	1-5	7732-18-5	N.A. N.A	

**PHYSICAL DATA**

Physical State: LIQUID  
Colour: CLEAR  
Odour: ALCOHOL  
Threshold: 0.1-5100  
Specific Gravity: 0.810-0.816  
Vapor Pressure: 5.87 kPa@20°C (Ethanol)  
Vapor Density: 1.6 (Ethanol)  
Evaporation Rate: 1.7  
Boiling Point: 78.6°C  
pH: NOT AVAILABLE  
Solubility: SOLUBLE IN WATER  
Freezing Point/Melting Point: NOT AVAILABLE

**FIRE OR EXPLOSION HAZARD**

Flash Point: 16°C  
Flammable Limits: Lower 3.3% Upper 19%  
Auto-Ignition Temp: 422°C (Ethanol)  
Extinguishing Media: APPLY ALCOHOL-TYPE OR ALL-PURPOSE-TYPE FOAMS. USE CARBON DIOXIDE OR DRY CHEMICAL MEDIA FOR SMALL FIRES. WATER IS GENERALLY UNSUITABLE AND IT MAY HELP TO SPREAD FIRE.  
Special Firefighting Procedure: USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS & TO DISPERSE VAPOURS; REIGNITION IS POSSIBLE. USE SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.  
Hazardous Combustion Product: Oxides of Carbon

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 REACTIVITY DATA
 

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Stability: STABLE  
 Incompatibility: OXIDIZING MATERIALS  
 Hazardous Decomposition Products: BURNING CAN PRODUCE CARBON MONOXIDE AND/OR CARBON DIOXIDE.

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 TOXICOLOGICAL PROPERTIES
 

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Exposure Limit of Material: 1000ppm (TLV)  
 LC 50 of Material Species and Route: 31 to 823 ppm (Rat-4hrs)  
 LD 50 of Material Species and Route: 7000 mg/kg (Rabbit/Oral)  
 Carcinogenicity: N.AV  
 Sensitization to Material: N.AV  
 Reproduction Toxicity: N.AV  
 Teratogenicity: N.AV  
 Mutagenicity: N.A.

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 PREVENTIVE MEASURES
 

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Protective Equipment To Be Used: IMPERVIOUS CHEMICAL/RESISTANT GLOVES  
 Respiratory Protection: A NIOSH/MSHA RESPIRATOR WITH VAPOUR CARTRIDGES  
 Ventilation: NORMAL AIR FLOW  
 Protective Gloves: IMPERVIOUS CHEMICAL RESISTANT  
 Eye Protection: SAFETY GLASSES

## SPILL OR LEAK PROCEDURES:

Steps To Be Taken In Case Material Is Released or Spilled  
 CONTAIN SPILL, ABSORB ONTO INERT MATERIALS  
 PROVIDE ADEQUATE VENTILLATION .

## Waste Disposal Information:

DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, PROVINCIAL AND FEDERAL GOVERNMENT REGULATIONS

## Handling and Storage Conditions:

KEEP CONTAINERS UPRIGHT IN A COOL, DRY PLACE, KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE ONLY NON SPARKING BUNG WRENCHES AND TOOLS.

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 FIRST AID MEASURES
 

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Skin Contact: FLUSH SKIN WITH WATER. WASH CONTAMINATED CLOTHING BEFORE REUSE.  
 Eye Contact: IMMEDIATELY FLUSH EYES WITH PLENY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN.  
 Inhalation: REMOVE PERSON TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN  
 Ingestion: NEVER GIVE ANYTHING BY MOUTH IF VICTIM IS RAPIDLY LOSING CONSCIOUSNESS. DO NOT INDUCE VOMITING. HAVE VICTIM DRINK 8 OZ OF WATER TO DILUTE MATERIAL IN STOMACH. SEEK MEDICAL ATTENTION IMMEDIATELY

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 PREPARATION INFORMATION
 

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Prepared by: LAB PERSONNEL  
 Date Revised: JANUARY 2016