












255 Norman.
Lachine (Montreal), Que
H8R 1A3

Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)
(USA) Anachemia : 1(518) 297-4444
(CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: B-2 D-1A D-2B		TDG CLASS: 3 6.1 PIN: UN1986 PG: II
  	   	 

Section I. Product Identification and Uses

Product name	ETHYL ALCOHOL ACCUSOLV	CI#	Not available.
Chemical formula	Not applicable.	CAS#	Not applicable.
Synonyms	Denatured ethyl alcohol, GD-4095, CD-4095, 38318, 38325	Code	GD-4095
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3	Formula weight	Not applicable.
		Supersedes	
Material uses	For laboratory use only.		

Section II. Ingredients

Name	CAS #	%	TLV
1) ETHANOL	64-17-5	60-95	Exposure limit: ACGIH TWA 1000 ppm (1880 mg/m3)
2) METHANOL	67-56-1	3-7	Exposure limit: ACGIH TWA 200 ppm (262 mg/m3); STEL 250 ppm (328 mg/m3) (skin)
3) 2-PROPANOL	67-63-0	5-10	Exposure limit: ACGIH TWA 400 ppm (983 mg/m3); STEL 500 ppm (1230 mg/m3)

Toxicity values of the hazardous ingredients

ETHANOL:
ORAL (LD50): Acute: 3450 mg/kg (Mouse). 7060 mg/kg (Rat). 6300 mg/kg (Rabbit).
VAPOR (LC50): Acute: 20000 ppm (Rat) (10 hour(s)). 39000 mg/m3 (Mouse) (4 hour(s)).

METHANOL:
ORAL (LD50): Acute: 7300 mg/kg (Mouse). 14200 mg/kg (Rabbit).
DERMAL (LD50): Acute: 15800 mg/kg (Rabbit).
VAPOR (LC50): Acute: 64000 ppm (Rat) (4 hour(s)).

2-PROPANOL:
ORAL (LD50): Acute: 6410 mg/kg (Rabbit). 3600 mg/kg (Mouse). 5045 mg/kg (Rat).
ORAL (LDLo): Acute: 3570 mg/kg (Human).
DERMAL (LD50): Acute: 12800 mg/kg (Rabbit).
VAPOR (LC50): Acute: 16000 ppm (Rat) (8 hour(s)).

Section III. Physical Data

Physical state and appearance / Odor	Colorless liquid with typical wood alcohol odor.
pH (1% soln/water)	Not applicable.
Odor threshold	0.1 to 5100 ppm (Ethanol)
Percent volatile	100% (V/V)
Freezing point	Not available.
Boiling point	64.5°C (Methanol).
Specific gravity	Not available.
Vapor density	>1 (Air = 1)
Vapor pressure	12.80 KPa @ 20°C (Methanol)
Water/oil dist. coeff.	Separates from oil.
Evaporation rate	Not available.
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	CLOSED CUP: (Tag Closed Cup) 11°C (METHANOL).
Flammable limits	LOWER: 2% (2-PROPANOL) UPPER: 36.5% (METHANOL)
Auto-ignition temperature	385°C (Methanol).
Fire degradation products	Oxides of carbon. Formaldehyde.
Fire extinguishing procedures	Use alcohol-type or all-purpose type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires. Water may be ineffective to extinguish fires. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out. Use water spray to disperse vapors; re-ignition is possible.
Fire and Explosion Hazards	Flammable liquid. Vapors formed from this product may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from handling point. Vapor forms explosive mixture with air. Contact with oxidizers may cause fire and/or explosion. Container explosion may occur under fire conditions or when heated. Not expected to be sensitive to mechanical impact. Sensitive to static discharge. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Skin absorption. Eye contact. Skin contact.
Effects of Acute Exposure	May be fatal by ingestion, inhalation or skin absorption. Severe irritant. May cause central nervous system depression. Target organs: eyes, skin, liver, kidneys, heart, central nervous system, blood, gastrointestinal tract, respiratory system, lungs, reproductive system. 2000 ppm (2-PROPANOL) is immediately dangerous to life or health.
Eye	Causes severe irritation. May cause severe burns and loss of vision. May cause permanent damage.
Skin	Causes skin irritation. Repeated or prolonged exposure may lead to dermatitis, erythema and scaling. Methanol can be absorbed through the skin in toxic and lethal amounts. 2-Propanol can also be absorbed through the skin.
Inhalation	Material is irritating to mucous membranes and upper respiratory tract. Inhalation of high concentrations can produce stupor, headache, dizziness, faintness, drowsiness, nausea, and vomiting. Symptoms depend on the level and duration of exposure. Extremely high levels cause unconsciousness, central nervous system depression, blindness and death.
Ingestion	The most hazardous component is methanol, a toxic substance which has produced blindness and death. The symptoms include dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma. Lethal dose for humans is estimated at 131 grams 2-propanol.

Section V. Toxicological Properties

Effects of Chronic Overexposure Long term exposure to methanol has been associated with dermatitis, erythema, headaches, giddiness, conjunctivitis, insomnia and impaired vision. May cause heart, kidney, lung, central nervous system, liver, spleen, brain, and eye damage. Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis. May damage other organs (see acute effects). Ethanol: Passes placental barrier and excreted in maternal milk in humans. Carcinogenic effects: Not available. Mutagenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. Medical conditions which may be aggravated: Individuals with preexisting diseases of the skin, eye, or liver may be more susceptible to the toxicity of overexposure to this product. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact Immediately flush eyes with copious quantities of water for at least 20 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.

Skin contact Immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Completely decontaminate clothing before reuse, or discard. If irritation occurs or persists seek medical attention.

Inhalation Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Seek immediate medical attention.

Ingestion Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing. DO NOT induce vomiting. If conscious, wash out mouth with water. Have conscious person drink several glasses of water to dilute. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Seek immediate medical attention.

Section VII. Reactivity Data

Stability Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.

Hazardous decomp. products Not available.

Incompatibility Oxidizing agents, acids, bases, reducing agents, acid chlorides, acid anhydrides, alkylaluminum solutions, acetyl bromide, acetyl chloride, ammonia, silver oxide, interhalogens, halogens, chlorine trioxide, chromic anhydride, chromyl chloride, peroxides, iodine, mercuric oxide, perchlorates, perchloric acid, permanganates, potassium t-butoxide, silver, sodium hydrazide, acetaldehyde, ethylene oxide, hexamethylene diisocyanate, hypochlorous acid, isocyanates, phosphorus trioxide, hydrides, carbon tetrachloride, chloroform, dichloromethane, diethylzinc, metals (potassium, magnesium, etc...), acetic anhydride, tetrachlorosilane, 2-propanol, hypochlorites, cyanuric acid.

Reaction Products Not available. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

ETHYL ALCOHOL ACCUSOLV

page 4/4

Protective Clothing in case of spill and leak Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Spill and leak Evacuate and ventilate the area. Eliminate all sources of ignition. Absorb on sand or vermiculite and place in a closed container for disposal. Use non-sparking tools. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch spilled material. Runoff to sewer may create fire or explosion hazard.

Waste disposal Burn in a chemical incinerator equipped with an after burner and scrubber. According to all applicable regulations.

Storage and Handling Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep container tightly closed and dry. Manipulate in a well ventilated area or under an adequate fume hood. Take precautionary measures against electrostatic discharges. Ground the container while dispensing. Ground all equipment containing material. Use only explosion proof equipment. Use non-sparking tools. Watch for accumulation in low confined areas. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Do not use pressure to dispense. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.).

Section IX. Protective Measures

Protective clothing Splash goggles. Impervious neoprene, butyl or natural rubber gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. If more than TLV, do not breathe vapor. Wear self-contained breathing apparatus. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.

Engineering controls Use in a chemical fume hood to keep airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments Flammable liquid! Toxic! Severe irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Keep away from heat, sparks and flame. Take precautionary measures against static discharges. Use non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation. Handle and open container with care. Container should be opened only by a technically qualified person.
Synergistic materials: Ethanol with carbon tetrachloride, chloroform, bromotrichloromethane, dimethylnitrosamine, thioacetamide, trichloroethylene, trinitrotoluene, manganese compounds, carbon disulfide, benzene. Methanol with carbon tetrachloride. Methanol may interact synergistically with chlorinated solvents (example: chloroform, bromotrichloromethane), dithiocarbamates (example: disulfiram), dimethylnitrosamine and thioacetamide. 2-Propanol increases the hepatotoxicity of carbon tetrachloride, chloroform, trichloroethylene and 1,1,2-trichloroethane. OTHER: Human-intolerance: ethanol (trichloroethylene, thiram disulfides, certain dithiocarbamates pesticides, dimethylformamide, n-butyramide, isobutyramide, cyanamide, calcium cyanamide, certain oximes, ethyleneglycol dinitrate).
NOTES TO PHYSICIAN: This product contains 3-7% v/v of methanol, a toxic substance having produced blindness and other serious effects on vision, as well as death. However, this product also contains the accepted antidote, ethanol (60-95% v/v).
RTECS NO: KQ6300000 (Ethanol).
RTECS NO: PC1400000 (Methanol).
RTECS NO: NT8050000 (2-Propanol).



NFPA

Prepared by MSDS Department/Département de F.S..

Validated 10-Feb-2011



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