MATERIAL SAFETY DATA SHEET

Ethanol 95%

1. Product Information

Product: Ethanol 95% **Product Codes:** 60705 60075 – 1 L
Product Use: Disinfectant and Laboratory Solvent
Supplier: maxill inc.
80 Elm Street, St. Thomas, ON
Canada N5R 6C8
Contacts: Head Office: (519) 631-7370 Fax: (519) 631-3388 Emergency 24 hour CANUTEC: (613) 996-6666

WHMIS Classification: **CLASS B2**  **CLASS D2(B)** 

2. Preparation Information

Date Prepared: 30 January 2008 **Supersedes:** 20 June 2005 **Revision:** 1
Prepared by: Operations Department
Glossary of Terms: NAV – Not Available NAP – Not Applicable DG – Dangerous Goods

3. Hazardous Ingredients

Ingredient	CAS	% Range	LD50 Oral		LD50 Dermal		LC50 Inhalation	
			mg/kg	Species	mg/kg	Species	ppm/4 h	Species
Ethyl Alcohol	64-17-5	60 - 100	7060	Rat	20000	Rabbit	31623	Rat
Isopropyl Alcohol	67-63-0	3 – 7	4420	Rat	13000	Rabbit	16970	Rat

4. Physical Data

Physical State: Liquid **Specific Gravity:** 0.7882 **Vapour Density:** 1.62 (air = 1)
Boiling Point: 78.7°C **Freezing Point:** < -20°C **Vapour Pressure:** 5.79 kPa @ 20°C
Appearance: Clear Mobile Liquid **Evaporation Rate:** 2.00 (BuAc = 1) **pH:** NAV
Odour: Typical Ethyl Alcohol **Odour Threshold:** NAV **Coeff. of H_20 / Oil Distribution:** NAV

5. Fire and Explosion Data

WHMIS CLASS B? Yes **Flash Point:** 13°C (TCC) **Sensitivity to Static Charge:** NAV
Upper Explosion Limit: 18.7% (in air) **Auto Ignition Temperature:** 421°C **Sensitivity to Impact:** Stable
Lower Explosion Limit: 3.3% (in air)
Extinction Media: Product is flammable. Use dry chemical, foam or CO_2 for a fire. Use a water spray to keep containers cool.
Conditions to Avoid: Avoid heat, sparks and open flame and temperatures above 30°C. Vapours formed from the product may travel or move by air currents and be ignited by pilot lights, sparks, electrical equipment or other ignition sources.
Hazardous Combustion Products: May emit toxic fumes of carbon monoxide and carbon dioxide, if exposed to fire. Carbon monoxide is highly toxic if inhaled carbon dioxide in sufficient concentrations can act as an asphyxiant.

6. Toxicological Properties

Route of Entry: Eyes, ingestion.
Effects of Acute Exposure:
Eyes: May cause irritation to the eyes with possible corneal injury.
Skin: Irritant on prolonged or repeated exposure.
Inhalation: Headache, dizziness, nausea, incoordination, drowsiness, loss of consciousness, irritation of the respiratory tract.
Ingestion: May cause headache, dizziness, nausea, incoordination, drowsiness, loss of consciousness.

LD50 Oral: 6872 mg/kg Rat **LD50 Dermal:** 19531 mg/kg Rabbit **LC50 Inhalation:** 30211 ppm/4h Rat
Irritancy of Product: Primarily eye irritant.
Exposure Limit: Odour thresholds are 0.1 to 5100 ppm for ethyl alcohol and 40 to 200 ppm for isopropyl alcohol.
Carcinogenicity: No
Sensitization to Product: No
Teratogenicity: No
Reproductive Toxicity: No
Mutagenicity: No
Effects of Chronic Exposure: Prolonged and repeated exposure to skin can cause defatting and drying of skin resulting in skin irritation and dermatitis. Exposure to high vapour concentrations may cause eye and respiratory tract irritation, headache, dizziness, nausea, incoordination drowsiness and loss of consciousness. Eye damage from contact with liquid

is reversible and proper treatment will result in healing within a few days. Damage is usually mild to moderate conjunctivitis, seen mainly as redness of the conjunctiva. Repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis.

Synergistic Materials: Ethanol with carbon tetrachloride, chloroform, bromotrichloromethane, dimethylnitrosamine, thioacetamide.

7. First Aid Measures

Eye Contact: Rinse immediately with cool water, remove contact lenses if any, and continue rinsing with water for at least 15 minutes while holding eyelids open. Consult a physician immediately.

Ingestion: Do not induce vomiting. Give victim about 250 mL of cool water and call a physician immediately. Do not give anything by mouth if person is unconscious or convulsing. If breathing is difficult, call a physician immediately.

Inhalation: Remove to fresh air. Artificial respiration should be given if breathing has stopped and cardiopulmonary resuscitation if the heart has stopped. Oxygen may be given if necessary. Call a physician immediately.

Skin Contact: Flush contaminated area with water for at least 20 minutes. Remove contaminated clothing under running water. Completely decontaminate clothing before re-use or discard it. If irritation occurs, seek medical attention.

8. Preventive Measures

Engineering Controls: General ventilation.

Handling Procedures: Avoid ingestion and/or eye contact.

Storage Requirements: Store in original container at controlled room temperature, away from incompatible materials. Keep container closed when not in use.

Leak and Spill Procedure: Mop up excess spilled liquid. For small spills, collect with absorbent material such as paper, vermiculite or floor absorbent. Dispose in accordance with applicable regulations.

Waste disposal: Dispose of product in accordance with applicable federal, provincial and municipal regulations.

Protective Equipment for Bulk Handling of Sealed Containers:

Respiratory: Not required under normal conditions of handling. Use a NIOSH approved respirator if vapour concentration exceeds 400 ppm.

Eyewear: Safety goggles are recommended.

Gloves: Impermeable gloves (rubber, synthetic) are recommended.

Footwear: Safety boots are recommended.

Other: Eye wash fountains are recommended.

Protective Equipment for End-Users:

Respiratory: Not required under normal conditions of use.

Eyewear: Safety goggles are recommended.

Gloves: Impermeable gloves (rubber, synthetic) are recommended.

Footwear: Not required under normal conditions of handling.

Other: Eye wash fountains are recommended.

9. Reactivity Data

Conditions of Instability: Stable

Incompatible Materials: Avoid contact with strong oxidizers. May react with aluminum at high temperatures.

Conditions of Reactivity: Heat, sparks, open flame, sources of ignition.

Hazardous Decomposition Products: May liberate toxic fumes of carbon oxides and formaldehyde if exposed to fire.

10. Special Shipping Information

DG	Proper Shipping Name	TDG Hazard Class	UN Number	Packing Group
Yes*	ALCOHOLS, N.O.S.	3	UN1987	II

* Where the product-contact container does not exceed containing 1 litre of product, a *Limited Quantity Exemption* applies.

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