

Part Number(s): S31003-001

**MATERIAL SAFETY DATA SHEET**

**SECTION I - MATERIAL IDENTIFICATION AND USE**

**Material Name Identifier:**

**Denatured Alcohol DA 2A**

Supplier Name: Sterling Marking Products Inc.  
 Street Address: 349 Ridout St. N.,  
 City and Province: London, Ontario  
 Postal Code: N6A 2N8

Telephone Numbers: (519) 434-5785, (800) 265-5957  
 Fax Number: (519) 434-9516, (800) 667-6600  
 Webpage: <http://www.sterling.ca>  
 E-Mail: [pjones@mail.sterling.ca](mailto:pjones@mail.sterling.ca)

**Emergency Telephone Number: CANUTEC (613) 996-6666; Cellular \*666**

Material Use: Solvent

**TDG Shipping Information:**

**ALCOHOLS, FLAMMABLE , TOXIC N.O.S.**

**Class: 3 – Flammable Liquid**  
**(6.1) – Poisonous Substances**  
**PG: II - Medium Danger**

**WHMIS Classification:**

Class B, Division 2 - Flammable Liquids  
 Class D, Division 1A – Acutely Toxic (Methyl alcohol)  
 Class D, Division 2B - Skin/Eye Irritant

**IATA Shipping (Air):**

ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.  
**Packaging Instruction for Limited Quantity: Y341**  
**Maximum Net Quantity** (per outer package): 1L  
 Refer to Pkg. Inst. No. for inner packaging type and maximum quantity per inner package. DGR – 54<sup>th</sup> edition

**SECTION II - HAZARDOUS INGREDIENTS**

Component	CAS Registry	Toxicology	Concentration % (w/w)
Ethanol	<b>64-17-5</b>	TLV: 1000ppm (ACGIH 1988-1989) L <sub>D</sub> 50: 7060 mg/kg (oral, rat) L <sub>D</sub> 50: 20,000 mg/kg (skin, rabbit) L <sub>C</sub> 50: 31,623 ppm/4H (inhalation, rat)	85.47
Methanol	<b>67-56-1</b>	TLV: 200 ppm (ACGIH 1988-1989) L <sub>D</sub> 50: 5628 mg/kg (oral, rat) L <sub>D</sub> 50: 20,000 mg/kg (skin, rabbit) L <sub>C</sub> 50: 64000 ppm/4H (rat)	13.68
Ethyl acetate	<b>141-78-6</b>	TLV: 400 ppm (ACGIH 1988-1989) L <sub>D</sub> 50: 11,300 mg/kg (oral, rat) L <sub>D</sub> 50: Not available (skin, rabbit) L <sub>C</sub> 50: 22,627 ppm/4H (inhalation, rat)	0.85

**Note:** All ingredients are listed on the Domestic Substances List (DSL) and the Toxic Substances Control Act (TSCA) list.

**SECTION III - PHYSICAL DATA**



**Physical State:** Liquid  
**Specific Gravity:** 0.79  
**Colour:** None (Colourless)  
**Evaporation Rate:** 1.8

**Boiling Point (°C):** 75.6  
**Odour:** Wood alcohol  
**Solubility in Water (20 °C):** 100% (Complete)  
**Flash Point (°C):** 12.5

#### SECTION IV - FIRE AND EXPLOSION DATA

**Flammability:** Flammable

**Flash Point (°C TCC):** 12.5

LEL (% vol) lowest value of components: Not available

UEL (% vol) highest value of components: Not available

**Hazardous Combustion Products:** Oxides of carbon, oxides of nitrogen, and other organic combustion products.

**Potential Hazards:** HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapours may form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapour explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated.

**Means of Extinction Fire:** CAUTION: This product has a low flash point: Use of water spray when fighting fire may be inefficient. Dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use media suitable for surrounding fire. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

**Special Fire-Fighting Procedures:** Clear area of unprotected personnel. Firefighters should wear NIOSH-approved, self-contained breathing apparatus (SCBA). Use water spray to cool fire-exposed surfaces. Also, use water to flush spilled material away from source. Vapours are harmful; stay upwind of a fire to minimize breathing of vapours, gases, fumes, or decomposition products being generated.

**Unusual Fire & Explosion Hazards:** Containers exposed to intense heat from fire must be cooled to prevent vapour pressure build-up that may result in container rupture. Cool containers exposed directly to flames with large quantities of water as needed to prevent weakening of container itself. Never use a welding or cutting torch on or near container.

**Empty Container Warning:** "Empty" containers contain residues (liquid, solid, and/or vapour) that can be dangerous. DO NOT pressurize, cut, weld, braze, grind, drill, solder, or expose containers to heat, sparks, open flame. They may explode and cause injury and/or death. DO NOT attempt to clean drums. Residues are difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioned. Dispose of all containers in an environmentally safe way and in accordance with governmental regulations. For work on tasks, refer to OSHA regulations ANSIZ49.1 and other governmental and industrial references pertaining to cleaning, repairing, welding, or other operations.

#### SECTION V - REACTIVITY DATA

**Stability:** Stable

**Incompatibility:** Strong oxidizing agents. Strong inorganic acids. Ethanol reacts with aluminum at high temperatures.

**Hazardous Decomposition Products:** Oxides of carbon, oxides of nitrogen, and other organic combustion products.

#### SECTION VI - TOXICOLOGICAL PROPERTIES

**Routes of Entry:** Eye, Skin, Skin Absorption, Inhalation, Ingestion

Effects of Acute Exposure:

**Eye:** Severe irritant. Vapors can irritate eyes, eye damage from contact with liquids 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.

**Skin:** Mild irritant. Repeated or prolonged exposure may lead to dermatitis, erythema and scaling.

**Skin Absorption:** Methanol can be absorbed through the skin in toxic and lethal amounts. Ethanol and ethyl acetate pose little risk in this respect.

**Inhalation:** Inhalation of high concentrations can produce dizziness, faintness, drowsiness, nausea and vomiting. Symptoms depend on the level and duration of exposure.

**Ingestion:** The most hazardous component in ethanol denatured 2A is methanol, a toxic substance which has produced blindness and death. The symptoms, following ingestion of ethanol denatured 2A include dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma.

Effects of Chronic Exposure:

Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis. Long term exposure to methanol has been associated with headache, giddiness, conjunctivitis, insomnia and impaired vision.

Repeated exposure to ethanol may exacerbate liver injury produced from other causes.

**Irritancy:** Hazardous by WHMIS criteria

**Respiratory Tract Sensitization:** Insufficient data available.

**Carcinogenicity:** The International Agency for Research on Cancer (IARC) has determined that the consumption of alcoholic beverages is casually related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus, and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not been verified in studies with laboratory animals. Established uses of denatured ethanol and non-beverage uses of pure ethanol are not considered to pose any significant cancer hazard.

## SECTION VII - PREVENTATIVE MEASURES

**Gloves:** Solvent impermeable gloves are required for repeated or prolonged contact.

**Eye Protection:** Wear safety glasses where contact with the eye is anticipated. Chemical safety goggles should be worn whenever there is a possibility of splashing or other contact with the eyes.

**Respiratory Protection:** Proper selection of respiratory protection depends upon many factors, including duration and level of exposure and conditions of use. In general, exposure to organic chemicals, such as those contained in this product, may not require the use of respiratory protection, if used in a well-ventilated area. In areas of restricted ventilation, a NIOSH approved organic vapour respirator may be required. Under certain conditions, such as spraying, a mechanical pre-filter may also be required. In confined areas, or in high exposure situations, a NIOSH/MSHA approved air-supplied respirator may be required. If the TLV's listed in Section II are exceeded, use a properly fitted NIOSH/MSHA approved respirator with an appropriate protection factor.

Use material only with adequate ventilation to prevent exceeding the recommended exposure limit or a build-up of explosive concentrations in the air. Use explosion proof equipment. No smoking or open lights. Air-dry contaminated clothing in a well ventilated area before laundering.

**Other Protective Equipment Recommended:** None.

**Engineering Controls:** Use general dilution and local exhaust in sufficient volume, and pattern to keep concentrations of hazardous ingredients listed in Section II below the lowest exposure limit stated.

**Leak and Spill Procedure:** Extinguish and do not turn on any ignition source until the area is determined to be free from fire or explosion hazard. Small spills can be flushed with large amounts of water; larger spills should be collected for disposal. Observe government regulations.

**Waste Disposal:** Review federal, provincial and local government requirements prior to disposal. Use a licensed waste treatment facility or reclaimer.

**Storage Requirements:** Store in a tightly closed container. Store away from incompatible materials. Store in a cool, dry, well-ventilated area. Ensure storage area has adequate ventilation, and no source of open flame or sparks. Limit quantity of the material in storage. Ensure all bottles are properly labeled.

**Special Precautions:** Ground all equipment to prevent static discharge. Keep containers away from heat, sparks, and open flame. Wash thoroughly with soap and water after handling material.

**SECTION VIII - FIRST AID**

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Eye:** Immediately flush eyes with a directed stream of water for at least 20 minutes, while holding eyelids open. If irritation or redness develops or persists, get medical attention.

**Skin:** Flush affected areas with large amounts of water, remove contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation or redness develops or persists, get medical attention.

**Inhalation:** Remove victim to fresh air. If breathing difficulties develop, administer oxygen and get medical attention. If victim is not breathing, administer artificial respiration and get medical attention.

**Ingestion:** DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs (Aspiration pneumonitis can be fatal). If victim conscious and alert, give victim lukewarm water. GET IMMEDIATE MEDICAL ATTENTION.

**NOTES TO PHYSICIAN:** Symptoms vary with the alcohol level of the blood. Mild alcohol intoxication occurs at blood levels between 0.05-0.15% and approximately 25% of individuals will show signs of intoxication at these levels. Above 0.15%, the person is definitely under the influence of ethanol and 50-95% of individuals at this level are clinically intoxicated. Severe poisoning occurs when blood ethanol level is 0.3-0.5%. Above 0.5%, the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration.

**Avoid the use of depressant drugs or the excessive administration of fluids. In the presence of hypoglycemia, administer 5-10% glucose intravenously, plus thiamine 100mg intramuscularly. Hemodialysis is indicated if the blood ethanol is above 5mg/mL. Naloxone may be useful to reverse clinical alcoholic coma and 0.04-1.2mg intravenously may arouse ethanol-intoxicated patients.**

**SECTION IX - PREPARATION AND ADDITIONAL INFORMATION**

**Prepared by:** Sterling Marking Products Inc.  
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Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond the control of the supplier, it is assumed that user of this material has been fully trained according to the mandatory requirements of WHMIS. If user requires independent information on ingredients in this or any other material, we recommend contact with the Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton, Ontario (1-800-263-8276) or CSST in Montreal, Quebec (514-873-3990).