


1. Identification

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| Product Identifier | Ethanol 95% |
| Other Means of identification | Denatured Ethanol: Ethyl Alcohol denatured with Isopropanol and Denatonium Benzoate |
| Recommended use and restrictions | As a solvent for use in cleaning solutions, cosmetics for external use, disinfectants, industrial detergents and soaps, inks, photographic films and emulsions, polishes, solvents and thinners, preserving solutions, dye intermediates, dyes, perfume materials and fixatives. |
| Supplier | maxill inc. 80 Elm Street St. Thomas, ON N5R 6C8 CA Phone: 519-631-7370 Fax: 519-531-3388 Website: maxill.com |
| Emergency Response Number | ChemTel 1-800-255-3924, outside US and Canada, 1-813-248-0585 CANUTEC: 1-888-CAN-UTEC (226-8832) |

2. Hazard identification

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| Physical hazards | Flammable liquids | Category 2 |
| Health hazards | Eye irritation | Category 2B |
| | Skin irritation | Category 2 |
| | Specific target organ toxicity - single exposure | Category 3 |
| Label elements |  | |
| Signal word | Danger | |
| Hazard statements | Highly flammable liquid and vapor. Causes skin and eye irritation May cause respiratory irritation. May cause drowsiness or dizziness. | |
| Precautionary statement | | |
| Prevention | Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash hands thoroughly after handling. Wear protective gloves and eye and face protection. | |

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| Response | <p>IF ON SKIN: Remove immediately all contaminated clothing. Rinse skin with water.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.</p> <p>If eye irritation persists: Get medical attention.</p> <p>In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.</p> |
| Storage | Store in a well-ventilated place. Keep cool. |
| Disposal | Dispose of contents and container in accordance with local/regional/national/international regulations. |
| Potential health effects | |
| Eyes | <p>Can cause eye irritation.</p> <p>Common symptoms include stinging, tearing, and redness.</p> |
| Ingestion | May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma. |
| Inhalation | High vapour concentrations may cause a burning sensation in the throat and nose, stinging and watering in the eyes. At concentrations which cause irritation, dizziness, faintness, drowsiness, nausea and vomiting may occur. |
| Skin | Mild irritant. Repeated or prolonged exposure may lead to dermatitis, erythema and scaling. |
| Chronic | <p>Effects of Repeated Overexposure: Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis.</p> <p>Other Health Hazards: Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the development of the fetal central nervous system and progression of fetal alcohol syndrome. Medical Conditions Aggravated by Overexposure: Repeated exposure to ethanol may aggravate previous liver condition. Skin contact may aggravate dermatitis.</p> |
| Other hazards which do not result in classification | Not available. |

3. Composition/information on ingredients

Mixture

| Chemical Name | Common name and synonyms | CAS number | % Volume |
|-------------------|--------------------------|------------|----------|
| Ethyl Alcohol | Ethanol | 64-17-5 | 60 – 100 |
| Isopropyl Alcohol | Isopropanol | 67-63-0 | 3 – 7 |

Contains 7 ppm Denatonium Benzoate.

4. First-aid measures

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| Inhalation | Remove victim to fresh air. Artificial respiration should be given if breathing has stopped and cardiopulmonary resuscitation if heart has stopped. Oxygen may be given if necessary. Seek medical attention 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. If irritation occurs seek medical attention. |
| Eye Contact | Immediately flush eyes with water for at least 20 minutes, holding the eyelids open. Seek medical attention immediately. |
| Ingestion | Do not induce vomiting. Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing. Have victim drink about 250 mL (8 fl. oz.) of water to dilute material in stomach. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Seek medical assistance immediately. |
| Most important symptoms/effects, acute and delayed | Alcohol intoxication will cause dizziness, incoherence, and nausea. |
| Indication of immediate medical attention and special treatment needed | Symptoms of ethanol intoxication 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 the blood ethanol level is 0.30 - 0.50%. Above 0.50% 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. |

5. Fire-fighting measures

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| Suitable extinguishing media | Apply alcohol-type or all-purpose-type foams by manufacturers' recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires. Water is generally unsuitable for large open pools of alcohol and may help to spread the fire. |
| Unusual Fire and Explosion Hazards | Vapours form from this product and 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. |
| Special Fire-Fighting Procedures | Use water spray to cool fire-exposed containers and structures. Use water spray to disperse vapours; reignition is possible. Use self-contained breathing apparatus and protective clothing. |

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Do not discharge into lakes, streams, ponds, or public waters.

7. Handling and storage

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| Precautions for safe handling | Keep away from heat, sparks and flames. Keep container closed when not in use. Use with adequate ventilation. Avoid breathing vapours. Avoid contact with eyes and skin. Wash exposed skin thoroughly after handling. Take precautions to prevent static electricity build-up when transferring contents. |
| Conditions for safe storage | Keep away from heat, sparks, and open flame. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store away from incompatible materials (see Section. 10.) |

8. Exposure controls/personal protection

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| Respiratory equipment | Up to 1000 ppm, an approved organic vapour cartridge respirator can be used. For concentrations above 1000 ppm, an air-supplying respirator is recommended. The user should consult a respirator guide, such as the Canadian Standards Association's guide Z94.4-M1982. |
| Appropriate engineering controls | The ventilation system should be non-sparking, grounded and separate from other exhaust ventilation systems. Local ventilation is recommended when handling. |
| Protective gloves | Neoprene, butyl or natural rubber. |
| Eye protection | Chemical resistant goggles when handling. |
| Other protective equipment | Eye bath, safety shower and other protective equipment as required. |
| Thermal hazards | Not applicable. |

9. Physical and chemical properties and safety characteristics

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| Appearance | Colorless liquid | |
| Odor | Typical lower alcohol odor | |
| Odor threshold | Approximately 0.1 to 5100 ppm for ethyl alcohol and 40 to 200 ppm for isopropyl alcohol, as reported in appendix 1 of the Canadian Standards Association guide Z94.4-M1982. | |
| pH | Not applicable. | |
| Melting point/freezing point | Approx. minus 100 deg. C | |
| Boiling point range | Approximately 78 to 83 deg. C | |
| Flash point | 13 (Tag closed cup, ASTM D-56) | |
| Evaporation rate | 1.7 (butyl acetate = 1) | |
| Upper/lower flammability or explosive limits | | |
| Flammability limit - lower (%) | 3.3% V/V for 100% Ethanol, 2.5% V/V for 100% Isopropyl alcohol | |
| Flammability limit - upper (%) | 19 % V/V for 100% Ethanol, 12 % V/V for 100% Isopropyl alcohol | |
| Vapor pressure | 5.87 KPA @ 20 deg. C, for 100% Ethanol, 4.26 KPA @ 20 deg. C for 100% IPA | |
| Vapor density | 1.61 (air=1) | |
| Relative density (liquid) | 0.7882 @ 20 deg. C | |
| Solubility in water | Complete | |
| Solubility in oil | Separates from oil | |
| Partition coefficient | N-octanol/water 0.032 approx. | |
| Auto-ignition temperature | Approx. 370 deg. C | |
| Decomposition temperature | Specific data not available | |
| Viscosity | Approx. 1.35 cp @ 20 deg. C | |
| % Volatiles by volume | 100 | |
| Chemical Formula | Ethanol: C ₂ H ₅ -OH | Molecular weight: 46.07 |
| | Isopropyl Alcohol: CH ₃ -CHOH-CH ₃ | Molecular weight: 60.9 |
| | Water: H ₂ O | Molecular weight :18.02 |

10. Stability and reactivity

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| Possibility of hazardous reactions | Oxidizing materials |
| Chemical stability | Stable |
| Conditions to avoid | Sources of ignition |
| Hazardous combustion/decomposition products | Burning can produce carbon monoxide and/or carbon dioxide |
| Reactivity | This product may react with strong oxidizing agents. |
| Incompatible materials | Strong oxidizing agents. Acids. |

11. Toxicological information

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| Routes of exposure | Eye, Skin contact, Inhalation, Ingestion | |
| Information on likely routes of exposure | | |
| Ingestion | May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma. | |
| Skin absorption | No adverse effects with normal skin. However, potentially harmful amounts of material may be absorbed across markedly abraded skin when contact is sustained, particularly in children. | |
| Inhalation | High vapour concentrations may cause a burning sensation in the throat and nose, stinging and watering in the eyes. At concentrations which cause irritation, dizziness, faintness, drowsiness, nausea and vomiting may occur. | |
| Skin contact | Mild irritant. Repeated or prolonged exposure may lead to dermatitis, erythema and scaling. | |
| Eye contact | Severe eye irritant. Vapours can irritate eyes. 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. | |
| Symptoms related to the physical, chemical and toxicological characteristics | May cause drowsiness and dizziness. Headache. Nausea. Vomiting. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. | |
| Effect of long-term exposure | Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis. | |
| Medical conditions aggravated by overexposure | Repeated exposure to ethanol may exacerbate liver injury produced from other causes. | |
| Other - reproductive toxicity of ethanol when consumed as a beverage during pregnancy | Ethanol has been identified in studies as a developmental toxicant when consumed as a beverage during pregnancy. | |
| Information on toxicological effects | | |
| Acute toxicity | | |
| Ethyl Alcohol | Skin | LD50 - Rabbit - 20,000 mg/kg |
| | Respiratory | LC50 - Rat - 31,623 ppm/4h. |
| | Ingestion | LD50 - Rat - 7,060 mg/kg |
| Isopropyl Alcohol | Skin | LD50 - Rabbit - 13,000 mg/kg |
| | Respiratory | LC50 - Rat - 16,970 ppm/4h. |
| | Ingestion | LD50 - Rat - 4,420 mg/kg |


12. Ecological information

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| Ecotoxicity | See below |
| Ecotoxicological data | |
| Ethyl Alcohol CAS 64-17-5 | |
| Acute fish toxicity | LC50 / 96 HOUR Oncorhynchus mykiss (rainbow trout) > 10,000 mg/L LC50 / 96 HOUR Pimephales promelas (fathead minnow) > 13,400 mg/L |
| Toxicity to aquatic plants | Growth inhibition / 96 HOURS Chlorella vulgaris (Fresh water algae) 1,000 mg/L |
| Toxicity to microorganisms | Toxicity Threshold / Pseudomonas putida 6,500 mg/L Summary: Inhibition of cell multiplication begins. |
| Persistence and degradability | Biodegradation is expected. |
| Biaccumulative potential | Biaccumulation is unlikely. |
| Other adverse effects | BOD: 740-840 mg/g |
| Isopropyl Alcohol CAS 67-63-0 | |
| Acute fish toxicity | LC50 / 96 hours Pimephales promelas: 9,640 mg/L |
| Toxicity to aquatic plants | EC50 / 72 hours Scenedesmus subspicatus > 1,000 mg/L |
| Toxicity to microorganisms | EC50 / 3 hours Activated sludge > 1,000 mg/L |
| Persistence and degradability | Readily biodegradable (77% degraded in 10 days). Expected to be hydrolytically stable, but rapidly degraded following atmospheric releases. |
| Biaccumulative potential | Bioconcentration factor (BCF) of 3.16. (Predicted bioconcentration factor). Significant bioaccumulation is not expected based on predicted BCF of 3.16. |

13. Disposal considerations

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| Spill | Contain spilled material. Provide adequate ventilation and protective equipment. Remove sources of heat, sparks or flames. Spill should be collected in suitable containers or absorbed on a suitable absorbent material for subsequent disposal. |
| Waste disposal | Waste material should be disposed of in an approved incinerator or in a designated landfill site, in compliance with all federal, provincial/state and local government regulations. |

14. Transport information

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| CANADA: UN number | 1987 |  |
| UN proper shipping name | ALCOHOLS, N.O.S. (Ethanol) | |
| Transport hazard class(es) | Primary Class 3 | |
| Packing group (if applicable) | II | |
| IMDG | UN-Number: UN1987 Class: 3 Packing Group: II EMS-No: F-E, S-D Proper shipping name: ALCOHOLS, N.O.S. (ETHANOL, ISOPROPANOL) | |
| Marine Pollutant | No | |
| IATA | UN-Number: 1987 Class: 3 Packing Group: II Proper shipping name: Alcohols, N.O.S. (ETHANOL, ISOPROPANOL) | |

15. Regulatory information

All ingredients are on the following inventories or are exempted from listing:

Country Notification

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| Australia | AICS |
| Canada | DSL |
| China | IECS |
| European Union | EINECS |
| Japan | ENCS/ISHL |
| Korea | ECL |
| New Zealand | NZIoC |
| Philippines | PICCS |
| USA | TSCA |
| California Prop 65 Components | WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm when drunk as a beverage: (ETHYL ALCOHOL) CAS No. 64-17-5 Revision Date: December 11, 2009 |

16. Other information

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| Issue date | 2021-04-27 |
| Version # | 02 |
| Effective date | 2021-04-27 |
| Other information | For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document. |
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