

Ethyl Alcohol DAG 2A**SECTION 1. IDENTIFICATION**

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|--------------------------------------|--|
| Product Identifier | Ethyl Alcohol DAG 2A |
| Other Means of Identification | Methylated spirits |
| Product Code(s) | ET4120 |
| Product Family | Organic |
| Recommended Use | Laboratory and industrial use. |
| Restrictions on Use | None known. |
| Supplier Identifier | Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995 |
| Emergency Phone No. | CANUTEC CANADA, 613-996-6666, 24 Hours CHEMTREC, 800-424-9300, 24 Hours |
| SDS No. | 0100 |

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Flammable liquid - Category 2; Acute toxicity (Oral) - Category 5; Acute toxicity (Inhalation) - Category 5; Eye irritation - Category 2A; Specific target organ toxicity (single exposure) - Category 1; Specific target organ toxicity (repeated exposure) - Category 2

Label Elements

Signal Word:
Danger

Hazard Statement(s):

Flammable liquid and vapour.
Causes eye irritation.
Causes skin irritation.
Harmful if swallowed or if inhaled.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Obtain special instructions before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Do not get in eyes, on skin, or on clothing.

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Do not breathe dust/fume/gas/mist/vapours/spray.
Wash hands and skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice/attention.
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
IF exposed or concerned: Get medical advice/attention.

Other Hazards

May be a health and fire hazard in a confined space.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

| Chemical Name | CAS No. | % | Other Identifiers |
|---------------|-----------|---------|-------------------|
| Ethanol | 64-17-5 | 85.5 | Ethyl Alcohol |
| Methanol | 67-56-1 | 13.7 | Methyl Alcohol |
| Ethyl acetate | 141-78-6 | 0.85 | Ethyl ethanoate |
| Water | 7732-18-5 | Balance | Dihydrogen Oxide |

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. If breathing has stopped, trained personnel should begin rescue breathing.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely. Immediately call a Poison Centre or doctor.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

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Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific Hazards Arising from the Product

Can ignite if strongly heated. Can be ignited by static discharge. Closed containers may rupture violently when heated releasing contents. May travel a considerable distance to a source of ignition and flash back to a leak or open container.

Very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Use extreme caution. Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: evacuate downwind locations. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Ventilate the area to prevent the gas from accumulating, especially in confined spaces. Stop or reduce leak if safe to do so. Knock down vapour with fog or fine water spray. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: dike spilled product to prevent runoff.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Do not get in eyes, on skin or on clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing in this product. Only use where there is adequate ventilation.

Conditions for Safe Storage

Store in an area that is: out of direct sunlight and away from heat and ignition sources, ventilated. Electrically bond and ground containers. Ground clips must contact bare metal. Separate from incompatible materials (see Section 10: Stability and Reactivity). Keep amount in storage to a minimum. Store in the original, labelled, shipping container. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Chemical Name | ACGIH TLV® | | OSHA PEL | | AIHA WEEL | |
|---------------|------------|----------------|-----------------|---------|-----------|-----|
| | TWA | STEL | TWA | Ceiling | 8-hr TWA | TWA |
| Ethyl acetate | 400 ppm | | Not established | | | |
| Methanol | 200 ppm | 250 ppm | | | | |
| Ethanol | | 1000 ppm A3 | Not established | | | |

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|-------|-----------------|--|-----------------|--|--|--|
| Water | Not established | | Not established | | | |
|-------|-----------------|--|-----------------|--|--|--|

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Do not allow product to accumulate in the air in work or storage areas, or in confined spaces. Provide eyewash in work area, if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Suitable materials are: neoprene rubber, butyl rubber, natural rubber.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge, wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

| | |
|---|--|
| Appearance | Clear colourless liquid. |
| Odour | Alcoholic |
| Odour Threshold | 100 ppm |
| pH | Not applicable |
| Melting Point/Freezing Point | Not available (melting); Not available (freezing) |
| Initial Boiling Point/Range | 74 - 79 °C (165 - 174 °F) |
| Flash Point | 12.0 °C (53.6 °F) |
| Evaporation Rate | Not available |
| Flammability (solid, gas) | Not available |
| Upper/Lower Flammability or Explosive Limit | 20% (upper); 3% (lower) |
| Vapour Pressure | 12 kPa |
| Vapour Density (air = 1) | 1.4 |
| Relative Density (water = 1) | 0.7889 |
| Solubility | Soluble in water; Not available (in other liquids) |
| Partition Coefficient, n-Octanol/Water (Log Kow) | Not available |
| Auto-ignition Temperature | 385 °C (725 °F) |
| Decomposition Temperature | Not available |
| Viscosity | Not available (kinematic); Not available (dynamic) |
| Other Information | |
| Physical State | Liquid |

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

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Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), ammonia.

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION**Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|---------------|---|-----------------------|------------------------|
| Ethyl acetate | 8000-16000 ppm (rat) (4-hour exposure) | 5600 mg/kg (rat) | > 18000 mg/kg (rabbit) |
| Methanol | 64,000 ppm (rat) (4-hour exposure) | 5,628 mg/kg (rat) | 15,800 mg/kg (rabbit) |
| Ethanol | > 32380 ppm (male rat) (4-hour exposure) | 7060 mg/kg (male rat) | > 15800 mg/kg (rabbit) |
| Water | Not available | > 89840 mg/kg (rat) | Not available |

Skin Corrosion/Irritation

May cause mild irritation based on information for closely related chemicals.

Serious Eye Damage/Irritation

Human experience shows serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure**Inhalation**

At high concentrations causes nose and throat irritation.

Skin Absorption

No information was located.

Ingestion

Toxic, can cause death severe irritation or burns to the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Toxic. Causes severe effects (serious permanent impairment or life-threatening) May cause harmful effects on the liver, effects on the nervous system and impaired vision including permanent blindness. Following skin contact: may cause dermatitis.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. No information was located for skin sensitization.

Carcinogenicity

| Chemical Name | IARC | ACGIH® | NTP | OSHA |
|---------------|---------------|----------------|------------------|------------|
| Ethyl acetate | Not evaluated | Not designated | Not Listed | |
| Methanol | Group 2B | A3 | | |
| Ethanol | Group 1 | Not Listed | Known carcinogen | |
| Water | Not Listed | Not Listed | Not Listed | Not Listed |

Not known to cause cancer.

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Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 2B = Possibly carcinogenic to humans. Group 1 = Carcinogenic to humans.

ACGIH® = American Conference of Governmental Industrial Hygienists. A3 = Animal carcinogen.

NTP = National Toxicology Program.

OSHA = US Occupational Safety and Health Administration.

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Conclusions cannot be drawn from the limited studies available.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water. Treat waste in an approved waste disposal facility.

SECTION 14. TRANSPORT INFORMATION

| Regulation | UN No. | Proper Shipping Name | Transport Hazard Class(es) | Packing Group |
|--------------|--------|--|----------------------------|---------------|
| Canadian TDG | UN1986 | FLAMMABLE LIQUID, N.O.S. (Ethanol, Methyl Alcohol) | 3 | II |

Environmental Hazards Environmentally Hazardous Substance

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

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SECTION 16. OTHER INFORMATION

| | | | |
|------------------------------|--|-------------------------|------------------------|
| NFPA Rating | Health - 2 | Flammability - 3 | Instability - 0 |
| SDS Prepared By | Alphachem Limited | | |
| Phone No. | (905)-821-2995 | | |
| Date of Preparation | August 28, 2015 | | |
| Date of Last Revision | December 11, 2015 | | |
| Revision Indicators | The following SDS content was changed on January 21, 2016: Section 11 - Toxicological Information; LC50/LD50 values. | | |
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