

Isobutyl Alcohol

SECTION 1. IDENTIFICATION

| | |
|--------------------------------------|--|
| Product Identifier | Isobutyl Alcohol |
| Other Means of Identification | Isobutanol, 2-Methyl-1-propanol |
| Product Code(s) | BU2510 |
| Product Family | Organic Solvent |
| 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 |
| SDS No. | 0629 |

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 3; Skin irritation - Category 2; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3

Label Elements



Signal Word:

Danger

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye damage.

May cause respiratory irritation.

Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash hands and skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF ON SKIN: Wash with plenty of water/

If skin irritation occurs: Get medical advice or attention.

IF INHALED: 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.

Storage:

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

| Chemical Name | CAS No. | % | Other Identifiers |
|----------------------|----------------|----------|------------------------------------|
| Isobutyl alcohol | 78-83-1 | > 99 | Isobutanol, 2-Methyl-1-propanol |

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. 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. Immediately call a Poison Centre or doctor. Specific treatment is required.

Ingestion

Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If in eyes: contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

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

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Use flooding quantities of water or other suitable extinguishing agent.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

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May travel a considerable distance to a source of ignition and flash back to a leak or open container. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents. In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Use extreme caution. Evacuate area. Fight fire from a protected, explosion-resistant location or maximum distance possible. Approach fire from upwind to avoid hazardous vapours or gases. Use water spray to flush spills away from ignition sources. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

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

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials. Eliminate all ignition sources if safe to do so. Distant ignition and flashback are possible. Before entry, especially into confined areas, check atmosphere with an appropriate monitor.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Contain spill with earth, sand, or absorbent material which does not react with spilled material. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area. Dike and recover contaminated water for appropriate disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid breathing in this product. Only use where there is adequate ventilation. Prevent accidental contact with incompatible chemicals. Use non-sparking tools. Electrically bond and ground equipment. Ground clips must contact bare metal. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this material.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Chemical Name | ACGIH TLV® | | OSHA PEL | | AIHA WEEL | |
|------------------|------------|------|----------|---------|-----------|-----|
| | TWA | STEL | TWA | Ceiling | 8-hr TWA | TWA |
| Isobutyl alcohol | 50 ppm | | 100 ppm | | | |

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower 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: nitrile rubber.

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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 | Musty |
| Odour Threshold | 0.83 ppm |
| pH | Not available |
| Melting Point/Freezing Point | -108 °C (-162 °F) (melting); -108 °C (-162 °F) (freezing) |
| Initial Boiling Point/Range | 108 °C (226 °F) |
| Flash Point | 28 °C (82 °F) |
| Evaporation Rate | 0.8 (n-butyl acetate = 1) |
| Flammability (solid, gas) | Not applicable |
| Upper/Lower Flammability or Explosive Limit | 10.6% (upper); 1.7% (lower) |
| Vapour Pressure | 9 mm Hg (1 kPa) |
| Vapour Density (air = 1) | 2.6 |
| Relative Density (water = 1) | 0.80 |
| Solubility | Slightly soluble in water; Highly soluble in alcohols (e.g. ethanol). |
| Partition Coefficient, n-Octanol/Water (Log Kow) | 0.76 |
| Auto-ignition Temperature | 415 °C (779 °F) |
| Decomposition Temperature | Not available |
| Viscosity | Not available (kinematic); Not available (dynamic) |
| Other Information | |
| Physical State | Liquid |

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

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

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), inorganic acids (e.g. hydrofluoric acid), aldehydes (e.g. acetaldehyde).

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

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| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|------------------|---------------|------------------|---------------------|
| Isobutyl alcohol | Not available | 2460 mg/kg (rat) | 3400 mg/kg (rabbit) |

Skin Corrosion/Irritation

There is limited evidence of moderate or severe irritation.

Serious Eye Damage/Irritation

May irritate or burn the eyes. Permanent damage including blindness may result.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Causes nose and throat irritation.

Ingestion

Harmful irritation of 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

May cause effects on the central nervous system, dermatitis.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Not known to cause cancer.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

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.

SECTION 14. TRANSPORT INFORMATION

| Regulation | UN No. | Proper Shipping Name | Transport Hazard Class(es) | Packing Group |
|--------------|--------|----------------------|----------------------------|---------------|
| IMO (Marine) | UN1212 | Isobutanol | 3 | III |
| IATA (Air) | UN1212 | ISOBUTANOL | 3 | III |

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| US DOT | UN1212 | Isobutanol | 3 | III |
| Canadian TDG | UN1212 | ISOBUTANOL | 3 | III |

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.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 1** **Flammability - 3** **Instability - 0**

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

Date of Preparation July 22, 2016

Date of Last Revision August 11, 2016

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Disclaimer This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.