Material Safety Data Sheet
City University of Hong Kong

MSDS ISOBUTYL ALCOHOL 0451

PRODUCT INFORMATION

Chemical name(s): ISOBUTYL ALCOHOL
Chinese Name: 異丁醇
Synonyms: 1-Hydroxymethylpropane; isobutanol; 2-methylpropanol; 2-methyl-1-propanol; Isopropylcarbinol
CAS No: 78-83-1
Molecular Weight: 74.12
Chemical Formula: (CH₃)₂CHCH₂OH

RISK SYMBOL

PHYSICAL DATA

Appearance: Clear, colorless solution.
Boiling Point: 108°C (226°F)
Odor: Sweet-musty odor.
Melting Point: -108°C (-162°F)
Solubility: 9.5g/100ml water @ 20°C (68°F).
Vapor Density (Air=1): 2.6
Specific Gravity: 0.803
Vapor Pressure (mm Hg): 8.8 @ 20°C (68°F)
\( \text{pH: No information found.} \)
Evaporation Rate (BuAc=1): 0.8
\( \% \text{ Volatiles by volume @ 21°C (70°F): 100} \)

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FIRE AND EXPLOSION DATA
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Fire:
- Flash point: 28°C (82°F) CC
- Autoignition temperature: 415°C (779°F)
- Flammable limits in air % by volume:
  - LEL: 1.7; UEL: 10.6
- Flammable Liquid and Vapor!

Explosion:
- Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Containers may explode in heat or fire.

Fire Extinguishing Media:
- Dry chemical, foam or carbon dioxide. Do not use a solid stream of water, since the stream will scatter and spread the fire. Water spray may be used to keep fire exposed containers cool.

Special Information:
- In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Vapors can flow along surfaces to distant ignition source and flash back.

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REACTIVITY DATA
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Stability: Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products: Burning may produce carbon monoxide, carbon dioxide and isobutylene.
Hazardous Polymerization: Will not occur.
Incompatibilities: Oxidizing agents, inorganic acids, aldehydes, isocyanates.
Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

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HEALTH HAZARD DATA
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Emergency Overview
- Warning! Flammable liquid and vapor. Harmful if swallowed, inhaled or absorbed through skin. Affects central nervous system. Causes irritation to skin, eyes and respiratory tract. Potential health effects

The above information is believed to be accurate to the best of our knowledge. No responsibilities or liabilities are assumed or implied by CITY U for their inaccuracies.
Inhalation:
Causes irritation to respiratory tract. Effects from overexposure include headache, dizziness, muscle weakness, drowsiness, incoordination, confusion, and coma. High concentrations can cause central nervous system damage, pulmonary edema, and liver damage. Death may occur from respiratory failure.

Ingestion:
Ingestion may cause nausea, vomiting, and diarrhea. Large doses may cause central nervous system damage, pulmonary edema, and liver damage. Death may occur from respiratory failure.

Skin Contact:
Skin contact causes irritation, redness, and pain. May be absorbed through the skin; symptoms of absorption may be similar to those from ingestion exposure.

Eye Contact:
Vapors cause irritation, redness, and blurred vision. Splashes may cause severe irritation or eye damage.

Chronic Exposure: Prolonged or repeated skin exposure may cause dermatitis.
Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

FIRST AID MEASURES

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Skin Contact:
Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Wash clothes before reuse. Get medical attention if irritation develops or persists.

Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

PREVENTATIVE MEASURES

Airborne Exposure Limits:
-OSHA Permissible Exposure Limit (PEL): 100 ppm (TWA)
-ACGIH Threshold Limit Value (TLV): 50 ppm (TWA)
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators (NIOSH Approved):
If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Handling and Storage:
Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

ENVIRONMENTAL PROTECTION DATA

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e.g., Vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. J. T. Baker SOLUSORB(R) solvent adsorbent is recommended for spills of this product.

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