



Iso Butyl Acetate

1. Product Identification

Synonyms: Actic Acid, 2-Methylpropyl Ester

CAS No.: 110-19-0

Molecular Weight: 116.16

Chemical Formula: $\text{CH}_3\text{CO}_2\text{CH}_2\text{CH}(\text{CH}_3)_2$

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Isobutyl Acetat	110-19-0	min99.5%	Yes

3. Hazards Identification

Emergency Overview

WARNING! FLAMMABLE LIQUID AND VAPOR. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

Health Rating: 1 - Slight

Flammability Rating: 3 - Severe (Flammable)

Reactivity Rating: 1 - Slight

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES;
CLASS B EXTINGUISHER

Storage Color Code: Red (Flammable)



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Potential Health Effects

Inhalation:

May cause irritation to the respiratory tract. In high concentrations, it is a mild central nervous system depressant and prolonged overexposure may cause weakness, drowsiness, and unconsciousness.

Ingestion:

Large oral doses may cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Other symptoms may parallel those from inhalation.

Skin Contact:

May cause slight irritation. Prolonged contact may cause dermatitis.

Eye Contact:

May cause mild irritation, possible reddening.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

Do NOT induce vomiting. Give large amounts of water. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire:

Flash point: 18C (64F) CC



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Autoignition temperature: 421C (790F)

Flammable limits in air % by volume:

lcl: 1.3; ucl: 10.5

Flammable Liquid and Vapor! Contact with strong oxidizers may cause fire. Emits toxic fumes under fire conditions.

Explosion:

Sealed containers may rupture when heated. Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back.

Fire Extinguishing Media:

Dry chemical, alcohol foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool. Move exposed containers from fire area, if it can be done without risk.

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.

6. Accidental Release Measures

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! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. 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.

7. 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



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material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

For iso-Butyl Acetate:

- OSHA Permissible Exposure Limit (PEL):

150 ppm (TWA).

- ACGIH Threshold Limit Value (TLV):

150 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):

For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. 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.

9. Physical and Chemical Properties

Appearance:

Colorless liquid

Odor:



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Faint ester odor.

Solubility:

Slightly soluble in water.

Specific Gravity:

0.871 @ 20C/4C

pH:

Neutral.

% Volatiles by volume @ 21C (70F):

100

Boiling Point:

118C (244F)

Melting Point:

-99C (-146F)

Vapor Density (Air=1):

4.0

Vapor Pressure (mm Hg):

17.8 @ 25C (77F)

Evaporation Rate (BuAc=1): 1.5

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Reaction with nitrates, strong oxidizers, strong alkalis, and strong acids may cause fire and explosion.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

For iso-Butyl Acetate:

Acute Toxicity: rat, oral LD50 dose 13400 mg/kg; rabbit, skin LD50 dose >17400 mg/kg.

Irritation Data: Open Draize (rabbit) skin, 500mg, mild; Std Draize (rabbit, 500 mg/24H) skin, moderate; eye, moderate.



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Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
Isobutyl Acetate (110-19-0) None	No	No	

12. Ecological Information

Environmental Fate:

When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the soil, this material may leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into the soil, this material is expected to readily biodegrade. When released to water, this material is expected to quickly evaporate. This material has an estimated bioconcentration factor (BCF) of less than 100.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: ISOBUTYL ACETATE

Hazard Class: 3

UN/NA: UN1213

Packing Group: II

Information reported for product/size: 500G



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International (Water, I.M.O.)

Proper Shipping Name: ISOBUTYL ACETATE

Hazard Class: 3

UN/NA: UN1213

Packing Group: II

Information reported for product/size: 500G

15. Other Information

NFPA Ratings: Health: **1** Flammability: **3** Reactivity: **0**

Label Hazard Warning:

WARNING! FLAMMABLE LIQUID AND VAPOR. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

Label Precautions:

Keep away from heat, sparks and flame.

Keep container closed.

Use only with adequate ventilation.

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing vapor.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person.

Product Use:

Laboratory Reagent.

Revision Information:

No Changes.