

Material Safety Data Sheet

Version 4.1
Revision Date 02/14/2011
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Isobutyl acetate		
Product Number	: W217506	Manufacturer	Sigma-Aldrich Corporation
Brand	: Aldrich		3050 Spruce St.
Product Use	: For laboratory research purposes.		St. Louis, Missouri 63103
Supplier	: Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA		USA
Telephone	: +1 800-325-5832		
Fax	: +1 800-325-5052		
Emergency Phone # (For both supplier and manufacturer)	: (314) 776-6555		
Preparation Information	: Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956		

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid

GHS Classification
Flammable liquids (Category 2)

GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

HMIS Classification

Health hazard: 0
Flammability: 3
Physical hazards: 0

NFPA Rating

Health hazard: 0
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

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Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₆H₁₂O₂
Molecular Weight : 116.16 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Isobutyl acetate 110-19-0	203-745-1	607-026-00-7	+

4. FIRST AID MEASURES

General advice

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

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapour or mist.

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Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Isobutyl acetate	110-19-0	TWA	150 ppm	USA, ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation			
		TWA	150 ppm 700 mg/m ³	USA, OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	150 ppm 700 mg/m ³	USA, Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m ³ is approximate.			
		TWA	150 ppm 700 mg/m ³	USA, NIOSH Recommended Exposure Limits

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form clear, liquid

Colour colourless

Safety data

pH no data available

Melting point/freezing point Melting point/range: -99 °C (-146 °F) - lit.

Boiling point	115 - 117 °C (239 - 243 °F) - lit.
Flash point	22 °C (72 °F) - closed cup
Ignition temperature	423 °C (793 °F)
Autoignition temperature	no data available
Lower explosion limit	1.3 % (V)
Upper explosion limit	10.5 % (V)
Vapour pressure	20 hPa (15 mmHg) at 20 °C (68 °F)
Density	0.867 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	4.01 - (Air = 1.0)
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapours may form explosive mixture with air.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid

Strong oxidizing agents, Strong bases

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD₅₀
LD₅₀ Oral - rat - 13,400 mg/kg

Inhalation LC₅₀

no data available

Dermal LD₅₀

LD₅₀ Dermal - rabbit - > 17,400 mg/kg

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - rabbit - Open irritation test

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

no data available

Additional Information

RTECS: AI4025000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - Leuciscus idus melanotus - 101 mg/l - 48 h

LC0 - Leuciscus idus melanotus - 70 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates. LC50 - Daphnia magna (Water flea) - 250 mg/l - 24 h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

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Delivery 0840486713-000010 Purchase Order 2705AR12107

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1213 Class: 3
Proper shipping name: Isobutyl acetate
Reportable Quantity (RQ): 5000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

Packing group: II

IMDG

UN number: 1213 Class: 3
Proper shipping name: ISOBUTYL ACETATE
Marine pollutant: No

EMS-No: F-E, S-D

IATA

UN number: 1213 Class: 3
Proper shipping name: Isobutyl acetate

Packing group: II

15. REGULATORY INFORMATION

OSHA Hazards

Flammable liquid

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard

Massachusetts Right To Know Components

Isobutyl acetate

CAS-No.
110-19-0

Revision Date
1993-04-24

Pennsylvania Right To Know Components

Isobutyl acetate

CAS-No.
110-19-0

Revision Date
1993-04-24

New Jersey Right To Know Components

Isobutyl acetate

CAS-No.
110-19-0

Revision Date
1993-04-24

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California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further Information

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