

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name ***Isobutyl acetate***
Stock number: A1489Z, L15010
CAS Number: 110-19-0
EC number: 203-745-1
Index number: 607-026-00-7

1.2 Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier: Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department: Product safety Tel + +049 (0) 7275 988687-0
1.4 Emergency telephone number: Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



F+ Highly flammable

R11: Highly flammable.

R66: Repeated exposure may cause skin dryness or cracking.

Information concerning particular hazards for human and environment:

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

Other hazards that do not result in classification

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

Precautionary statements

The substance is classified and labelled according to the CLP regulation.

GHS02

Danger

H225 Highly flammable liquid and vapour.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P262 Do not get in eyes, on skin, or on clothing.

P243 Take precautionary measures against static discharge.

EUH066 Repeated exposure may cause skin dryness or cracking.

Additional information:

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation:

110-19-0 Isobutyl acetate

Identification number(s):

EC number:

203-745-1

Index number:

607-026-00-7

SECTION 4: First aid measures**4.1 Description of first aid measures**

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

After swallowing

Rinse opened eye for several minutes under running water. Then consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

Seek medical treatment.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing agents

CO2, sand, extinguishing powder. Do not use water.

5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach sewage system or water bodies.

Do not allow to enter the ground/soil.

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6.3 Methods and material for containment and cleaning up:

Keep away from ignition sources.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

Prevention of secondary hazards:

Keep away from ignition sources.

6.4 Reference to other sections

See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

7.2 Conditions for safe storage, including any incompatibilities**Storage Requirements to be met by storerooms and containers:**

Store in cool location.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
No further relevant information available.

7.3 Specific end use(s)**SECTION 8: Exposure controls/personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with critical values that require monitoring at the workplace:

Isobutyl acetate
ppm
ACGIH TLV 150
Austria MAK 150
Belgium TWA 150; 187-STEL
Denmark TWA 150
France VME 150; 200-VLE
Germany MAK 200
Korea TLV 150
Netherlands MAC-TGG 150
Switzerland MAK-W 150; 300-KZG-W
United Kingdom TWA 150; 187-STEL
USA PEL 150

8.1 Control parameters**Components with critical values that require monitoring at the workplace:****110-19-0 Isobutyl acetate (100,0%)**

AGW (Germany)	300 mg/m ³ , 62 ppm 2 (I); Y, AGS
MAK (TRGS 900) (Germany)	480 mg/m ³ , 100 ppm 37; DFG, Y
PEL (USA)	700 mg/m ³ , 150 ppm
REL (USA)	700 mg/m ³ , 150 ppm
TLV (USA)	713 mg/m ³ , 150 ppm

Additional information:

No data

8.2 Exposure controls**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Do not inhale gases / fumes / aerosols.

Breathing equipment:

Maintain an ergonomically appropriate working environment.

Protection of hands:

Use breathing protection with high concentrations.
Check protective gloves prior to each use for their proper condition.

Material of gloves

Impervious gloves

Penetration time of glove material

Not determined

Eye protection:

Safety glasses

Body protection:

Face protection
Protective work clothing.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Liquid
Colour:	Colourless
Smell:	Fruit-like
Odour threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range:	-99 °C
Boiling point/Boiling range:	116-117 °C
Sublimation temperature / start:	Not determined

Flash point:	18 °C
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	510 °C

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Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Critical values for explosion:	
Lower:	2,4 Vol %
Upper:	10,5 Vol %
Steam pressure at 20 °C:	17 hPa
Density at 20 °C	0,87 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water at 20 °C:	7 g/l
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic at 20 °C:	0,7 mPas
kinematic:	Not determined.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity	No information known.
10.2 Chemical stability	Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions	No dangerous reactions known
10.5 Incompatible materials:	Oxidizing agents
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute toxicity:	No effects known.

LD/LC50 values that are relevant for classification:

Oral LD50 4763 mg/kg (rabbit)

Skin irritation or corrosion:	Causes mild irritant effect. Repeated exposure may cause skin dryness or cracking.
Eye irritation or corrosion:	May cause irritation
Sensitization:	No sensitizing effect known.
Germ cell mutagenicity:	No effects known.
Carcinogenicity:	No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:	No effects known.
Specific target organ system toxicity - repeated exposure:	No effects known.
Specific target organ system toxicity - single exposure:	No effects known.
Aspiration hazard:	No effects known.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity	
Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability	No further relevant information available.
12.3 Bioaccumulative potential	No further relevant information available.
12.4 Mobility in soil	No further relevant information available.
Additional ecological information:	
General notes:	Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Other adverse effects	No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Recommendation	Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number	
ADR, IMDG, IATA	UN1213
14.2 UN proper shipping name	
ADR	1213 ISOBUTYL ACETATE
IMDG, IATA	ISOBUTYL ACETATE
14.3 Transport hazard class(es)	
ADR	
	
Class	3 (F1) Flammable liquids.
Label	3

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Safety data sheet
according to 1907/2006/EC, Article 31

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IMDG, IATA



Class Label 3 Flammable liquids.
3

Packing group ADR, IMDG, IATA II

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user Kemler Number: Warning: Flammable liquids.
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14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ): E2
Limited quantities (LQ) 1L
Transport category 2
Tunnel restriction code D/E

UN "Model Regulation": UN1213, ISOBUTYL ACETATE, 3, II

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Chemical

Substances Substance is listed.

Standard for the Uniform Scheduling of Drugs and Poisons Substance is not listed.

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances) Substance is not listed.

Substances of very high concern (SVHC) Substance is not listed.

according to REACH, Article 57 Substance is listed.

REACH - Pre-registered substances Substance is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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