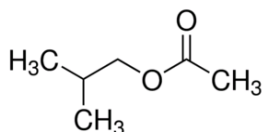


### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form : Substance  
:  
CAS No : 110-19-0  
Product code : 04212  
Chemical structure :



##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

###### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

###### 1.2.2. Uses advised against

No additional information available

##### 1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.  
107 Wode House Road, Jehangir Villa, Colaba  
400005 Mumbai - INDIA  
T +91 22 6663 6663 - F +91 22 6663 6699  
[info@lobachemie.com](mailto:info@lobachemie.com) - [www.lobachemie.com](http://www.lobachemie.com)

##### 1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H225  
Category 2

Full text of classification categories and H statements : see section 16

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

F; R11  
R66

Full text of R-phrases: see section 16

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour

Precautionary statements (CLP) :

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

EUH phrases

: EUH066 - Repeated exposure may cause skin dryness or cracking

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name

: ISO BUTYL ACETATE FOR SYNTHESIS

CAS No

: 110-19-0

Full text of R- and H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact

: Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact

: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion

: Rinse mouth out with water. If you feel unwell, seek medical advice.

### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).  
Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.  
Explosion hazard : May form flammable/explosive vapour-air mixture.

#### 5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.  
Precautions for safe handling : No naked lights. No smoking. Use only non-sparking tools.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment.  
Storage conditions : Keep in fireproof place. Keep container tightly closed.  
Incompatible materials : Heat sources.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

### 8.2. Exposure controls

|                          |                                      |
|--------------------------|--------------------------------------|
| Hand protection          | : protective gloves                  |
| Eye protection           | : Chemical goggles or safety glasses |
| Skin and body protection | : Wear suitable protective clothing  |
| Respiratory protection   | : Wear appropriate mask              |

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state                             | : Liquid  |
| Colour                                     | : Clear Colorless.                                |
| Odour                                      | : faint ester odor.                               |
| Odour threshold                            | : No data available                               |
| pH   | : 7   |
| Relative evaporation rate (butylacetate=1) | : 1.5   |
| Melting point                              | : -78 °C  |
| Freezing point                             | : No data available                               |
| Boiling point                              | : 124 - 126                                       |
| Flash point                                | : 23 °C   |
| Auto-ignition temperature                  | : 421 °C  |
| Decomposition temperature                  | : No data available                               |
| Flammability (solid, gas)                  | : Flammable<br>Highly flammable liquid and vapour |
| Vapour pressure                            | : 20 hPa at 20 °C                                 |
| Relative vapour density at 20 °C           | : 4   |
| Relative density                           | : No data available                               |
| Density                                    | : 0.871 g/cm <sup>3</sup>                         |
| Relative gas density                       | : 4.01  |
| Solubility                                 | : Water: Slightly soluble in water                |
| Log Pow                                    | : 1.82  |
| Viscosity, kinematic                       | : No data available                               |
| Viscosity, dynamic                         | : No data available                               |
| Explosive properties                       | : No data available                               |
| Oxidising properties                       | : No data available                               |
| Explosive limits                           | : 0.017 - 0.076 vol %                             |

#### 9.2. Other information

No additional information available

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Open flame. Direct sunlight.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified  
pH: 7

Additional information : Repeated exposure may cause skin dryness or cracking

Serious eye damage/irritation : Not classified  
pH: 7

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### ISO BUTYL ACETATE FOR SYNTHESIS (110-19-0)

|         |      |
|---------|------|
| Log Pow | 1.82 |
|---------|------|

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

Additional information : Handle empty containers with care because residual vapours are flammable.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 1213

UN-No. (IMDG) : 1213

UN-No.(IATA) : 1213

UN-No.(ADN) : 1213

UN-No. (RID) : 1213

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : ISOBUTYL ACETATE

Proper Shipping Name (IMDG) : ISOBUTYL ACETATE

Proper Shipping Name (IATA) : ISOBUTYL ACETATE

Proper Shipping Name (ADN) : ISOBUTYL ACETATE

Proper Shipping Name (RID) : ISOBUTYL ACETATE

Transport document description (ADR) : UN 1213 ISOBUTYL ACETATE, 3, II, (D/E)

Transport document description (IMDG) : UN 1213 ISOBUTYL ACETATE, 3, II (18°C c.c.)

Transport document description (IATA) : UN 1213 ISOBUTYL ACETATE, 3, II

Transport document description (ADN) : UN 1213 ISOBUTYL ACETATE, 3, II

Transport document description (RID) : UN 1213 ISOBUTYL ACETATE, 3, II

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 3

Danger labels (ADR) : 3

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet



### IMDG

Transport hazard class(es) (IMDG) : 3

Danger labels (IMDG) : 3



### IATA

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3



### ADN

Transport hazard class(es) (ADN) : 3

Danger labels (ADN) : 3



### RID

Transport hazard class(es) (RID) : 3

Danger labels (RID) : 3



### 14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No


Other information : No supplementary information available

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

### 14.6. Special precautions for user

#### - Overland transport

|   |   |
|---|---|
| Classification code (ADR)                                 | : F1  |
| Limited quantities (ADR)                                  | : 1L  |
| Excepted quantities (ADR)                                 | : E2  |
| Packing instructions (ADR)                                | : P001, IBC02, R001   |
| Mixed packing provisions (ADR)                            | : MP19  |
| Portable tank and bulk container instructions (ADR)       | : T4  |
| Portable tank and bulk container special provisions (ADR) | : TP1   |
| Tank code (ADR)   | : LGBF  |
| Vehicle for tank carriage                                 | : FL  |
| Transport category (ADR)                                  | : 2   |
| Special provisions for carriage - Operation (ADR)         | : S2, S20   |
| Hazard identification number (Kemler No.)                 | : 33  |
| Orange plates   | :  |
| Tunnel restriction code (ADR)                             | : D/E   |
| EAC code  | : 3YE   |

#### - Transport by sea

|                                 |             |
|---------------------------------|-------------|
| Limited quantities (IMDG)       | : 1 L       |
| Excepted quantities (IMDG)      | : E2        |
| Packing instructions (IMDG)     | : P001      |
| IBC packing instructions (IMDG) | : IBC02     |
| Tank instructions (IMDG)        | : T4        |
| Tank special provisions (IMDG)  | : TP1       |
| EmS-No. (Fire)                  | : F-E       |
| EmS-No. (Spillage)              | : S-D       |
| Stowage category (IMDG)         | : B         |
| Flash point (IMDG)              | : 18°C c.c. |
| MFAG-No                         | : 129       |

#### - Air transport

|  |        |
|--|--------|
| PCA Excepted quantities (IATA)               | : E2   |
| PCA Limited quantities (IATA)                | : Y341 |
| PCA limited quantity max net quantity (IATA) | : 1L   |
| PCA packing instructions (IATA)              | : 353  |
| PCA max net quantity (IATA)                  | : 5L   |
| CAO packing instructions (IATA)              | : 364  |
| CAO max net quantity (IATA)                  | : 60L  |
| ERG code (IATA)                              | : 3L   |

#### - Inland waterway transport

|                           |             |
|---------------------------|-------------|
| Classification code (ADN) | : F1        |
| Limited quantities (ADN)  | : 1 L       |
| Excepted quantities (ADN) | : E2        |
| Carriage permitted (ADN)  | : T         |
| Equipment required (ADN)  | : PP, EX, A |



# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

Ventilation (ADN) : VE01  
Number of blue cones/lights (ADN) : 1

### - Rail transport

Classification code (RID) : F1  
Limited quantities (RID) : 1L  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P001, IBC02, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T4  
Portable tank and bulk container special provisions (RID) : TP1  
Tank codes for RID tanks (RID) : LGBF  
Transport category (RID) : 2  
Colis express (express parcels) (RID) : CE7  
Hazard identification number (RID) : 33

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

ISO BUTYL ACETATE FOR SYNTHESIS is not on the REACH Candidate List

ISO BUTYL ACETATE FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 133)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Denmark

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H225>; Emergency management guidelines for the storage of flammable liquids must be followed

### 15.2. Chemical safety assessment

No additional information available

# ISO BUTYL ACETATE FOR SYNTHESIS

## Safety Data Sheet

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### SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

|              |  |
|--------------|--|
| Flam. Liq. 2 | Flammable liquids, Category 2                        |
| H225         | Highly flammable liquid and vapour                   |
| EUH066       | Repeated exposure may cause skin dryness or cracking |
| R11          | Highly flammable                                     |
| R66          | Repeated exposure may cause skin dryness or cracking |
| F            | Highly flammable                                     |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*