

# Safety Data Sheet

according to 29 CFR 1910.1200(g)

## NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

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### 1. Identification

#### Product identifier

NATURAL ISOBUTYRALDEHYDE

CAS No: 78-84-2

#### Recommended use of the chemical and restrictions on use

##### Use of the substance/mixture

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

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

Company name:	Axxence Aromatic GmbH		
Street:	Tackenweide 28		
Place:	D-46446 Emmerich am Rhein		
Telephone:	+ 49 2822 68561 0	Telefax:	+ 49 2822 68561 39
E-mail:	info@axxence.com		
Contact person:	Safety Team	Telephone:	+ 49 2822 68561 0
E-mail:	safety-documentation@axxence.com		
Internet:	www.axxence.de		
Responsible Department:	Safety Management		

**Emergency phone number:** +49 2822 68561 99

### 2. Hazard(s) identification

#### Classification of the chemical

##### 29 CFR Part 1910.1200

Flammable liquids: Flam. Liq. 2  
 Serious eye damage/eye irritation: Eye Irrit. 2  
 Hazardous to the aquatic environment: Aquatic Acute 3

#### Label elements

##### 29 CFR Part 1910.1200

**Signal word:** Danger

**Pictograms:**



#### **Hazard statements**

Highly flammable liquid and vapor  
 Causes serious eye irritation

#### **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Keep container tightly closed.  
 Ground/bond container and receiving equipment.  
 Use explosion-proof electrical/ventilating/lighting equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Wash hands thoroughly after handling.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
 Continue rinsing.

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If eye irritation persists: Get medical advice/attention.

In case of fire: Use Water spray jet / Extinguishing powder / Foam / Carbon dioxide (CO2) to extinguish.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container to Organic waste.

### Hazards not otherwise classified

No information available.

## 3. Composition/information on ingredients

### Substances

Sum formula: C4 H8 O

Molecular weight: 72,11 g/mol

### Relevant ingredients

CAS No	Components	Quantity
78-84-2	NATURAL ISOBUTYRALDEHYDE	100 %

## 4. First-aid measures

### Description of first aid measures

#### **After inhalation**

Provide fresh air.

#### **After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

#### **After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

#### **After ingestion**

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of of water.

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

No information available.

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

Treat symptomatically.

## 5. Fire-fighting measures

### Extinguishing media

#### **Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

### Specific hazards arising from the chemical

Highly flammable. Vapors may form explosive mixtures with air.

### Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus.

### Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### **General advice**

Remove all sources of ignition.

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### Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

### Methods and material for containment and cleaning up

#### For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

### Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

No special measures are necessary.

#### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapors may form explosive mixtures with air.

#### Advice on general occupational hygiene

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

### Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

## 8. Exposure controls/personal protection

### Control parameters

### Exposure controls



### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear eye protection/face protection.

#### Hand protection

Suitable gloves type: Butyl caoutchouc (butyl rubber)

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is

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recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing .

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### Thermal hazards

Flame-retardant protective clothing. Wear anti-static footwear and clothing

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state:	Liquid
Color:	colorless
Melting point/freezing point:	-65 °C
Boiling point or initial boiling point and boiling range:	64 °C
Flammability:	not applicable
Lower explosion limits:	not applicable
Upper explosion limits:	1,6 vol. %
Flash point:	11 vol. %
Auto-ignition temperature:	-24 °C
Decomposition temperature:	165 °C
pH-Value:	not determined
Viscosity / kinematic: (at 20 °C)	not determined
Water solubility: (at 25 °C)	0,54 mm²/s
Solubility in other solvents	60 g/l
not determined	
Partition coefficient n-octanol/water:	0,74
Vapor pressure: (at 20 °C)	184 hPa
Vapor pressure: (at 50 °C)	623 hPa
Density (at 20 °C):	0,79 g/cm³
Relative vapour density: (at 20 °C)	2,48

### Other information

#### Information with regard to physical hazard classes

##### Explosive properties

The product is not: Explosive. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with explosive properties.

##### Oxidizing properties

The product is not: oxidising.

#### Other safety characteristics

Evaporation rate:	not determined
Solvent content:	0%
Solid content:	0%
Viscosity / dynamic: (at 20 °C)	0,43 mPa·s

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### 10. Stability and reactivity

#### Reactivity

Highly flammable.

#### Chemical stability

The product is stable under storage at normal ambient temperatures.

#### Possibility of hazardous reactions

No known hazardous reactions.

#### Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapors may form explosive mixtures with air.

#### Incompatible materials

No information available.

#### Hazardous decomposition products

No known hazardous decomposition products.

### 11. Toxicological information

#### Information on toxicological effects

##### **Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
78-84-2	NATURAL ISOBUTYRALDEHYDE				
	oral	LD50 3730 mg/kg	Rat	REACH registration	OECD 401
	dermal	LD50 5670 mg/kg	Rabbit	Gestis	
	inhalation (4 h) vapour	LC50 >23,6 mg/l	Rat	REACH registration	OECD 403

##### **Irritation and corrosivity**

Serious eye damage/eye irritation: Causes serious eye irritation

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

##### **Sensitizing effects**

Based on available data, the classification criteria are not met.

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

##### **Specific target organ toxicity (STOT) - single exposure**

Based on available data, the classification criteria are not met.

##### **Specific target organ toxicity (STOT) - repeated exposure**

Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA): Not listed.

Carcinogenicity (IARC): Not listed.

Carcinogenicity (NTP): Not listed.

##### **Aspiration hazard**

Based on available data, the classification criteria are not met.

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### 12. Ecological information

#### Ecotoxicity

The product is not: Ecotoxic.

#### Persistence and degradability

The product has not been tested.

#### Bioaccumulative potential

The product has not been tested.

#### Mobility in soil

The product has not been tested.

#### Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### Other adverse effects

No information available.

#### Further information

Avoid release to the environment.

### 13. Disposal considerations

#### Waste treatment methods

##### Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

##### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

### 14. Transport information

#### U.S. DOT 49 CFR 172.101

##### UN number or ID number:

UN 2045

##### Proper shipping name:

ISOBUTYRALDEHYDE

##### Transport hazard class(es):

3

##### Packing group:

II

Hazard label:

3



#### Marine transport (IMDG)

##### UN number or ID number:

UN 2045

##### UN proper shipping name:

ISOBUTYL ALDEHYDE (ISOBUTYRALDEHYDE)

##### Transport hazard class(es):

3

##### Packing group:

II

Hazard label:

3



Special Provisions:

-

Limited quantity:

1 L

Excepted quantity:

E2

EmS:

F-E, S-D

#### Air transport (ICAO-TI/IATA-DGR)

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**UN number or ID number:** UN 2045  
**UN proper shipping name:** ISOBUTYRALDEHYDE  
**Transport hazard class(es):** 3  
**Packing group:** II  
**Hazard label:** 3



Limited quantity Passenger: 1 L  
 Passenger LQ: Y341  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 353  
 IATA-max. quantity - Passenger: 5 L  
 IATA-packing instructions - Cargo: 364  
 IATA-max. quantity - Cargo: 60 L

### Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### Special precautions for user

Warning: Combustible liquid.

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

not applicable

## 15. Regulatory information

### U.S. Regulations

#### National regulatory information

SARA Section 311/312 Hazards:

Isobutyraldehyde (78-84-2): Fire hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

Isobutyraldehyde (78-84-2): De minimis limit = 1.0 %, Reportable threshold = Standard

### State Regulations

#### Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## 16. Other information

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### Abbreviations and acronyms

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  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
RID: Regulations concerning the international carriage of dangerous goods by rail  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
VOC: Volatile Organic Compounds  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>  
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

### Other data

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.