

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 1 of 8

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:	Andreas Goertz	Telephone: + 49 2822 68561 37
e-mail:	andreas.goertz@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	QM - Regulatory Affairs	

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.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 2 of 8

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

Hazardous components

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/stream 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.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 3 of 8

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/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

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 4 of 8

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		
Solid/liquid:		not applicable
Gas:		not applicable
Lower explosion limits:		1,6 vol. %
Upper explosion limits:		11 vol. %
Flash point:		-24 °C
Auto-ignition temperature:		165 °C
Decomposition temperature:		not determined
pH-Value:		not determined
Viscosity / kinematic:		0,54 mm ² /s
(at 20 °C)		
Water solubility:		60 g/L
(at 25 °C)		
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		0,74
Vapor pressure:		184 hPa
(at 20 °C)		
Vapor pressure:		623 hPa
(at 50 °C)		
Density (at 20 °C):		0,79 g/cm ³
Relative vapour density:		2,48
(at 20 °C)		

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:		0,43 mPa·s
(at 20 °C)		

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 5 of 8

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 mg/kg	3730	Rat	REACH registration	OECD 401
	dermal	LD50 mg/kg	5670	Rabbit	Gestis	
	inhalation (4 h) vapour	LC50 mg/l	>23,6	Rat	REACH registration	OECD 403

Irritation and corrosivity

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

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.

12. Ecological information

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 6 of 8

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

<u>UN number or ID number:</u>	UN 2045
<u>Proper shipping name:</u>	ISOBUTYRALDEHYDE
<u>Transport hazard class(es):</u>	3
<u>Packing group:</u>	II
Hazard label:	3



Marine transport (IMDG)

<u>UN number or ID number:</u>	UN 2045
<u>UN proper shipping name:</u>	ISOBUTYL ALDEHYDE (ISOBUTYRALDEHYDE)
<u>Transport hazard class(es):</u>	3
<u>Packing group:</u>	II
Hazard label:	3



Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

<u>UN number or ID number:</u>	UN 2045
<u>UN proper shipping name:</u>	ISOBUTYRALDEHYDE

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 7 of 8

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

Revision date: 07.12.2022

Revision No: 101

Abbreviations and acronymsADR: 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

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL ISOBUTYRALDEHYDE

Revision date: 12/07/2022

Product code: 222000US

Page 8 of 8

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.