

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### NATURAL ISOVALERALDEHYDE

Revision date: 01/28/2022

Product code: 269200US

Page 1 of 9

#### 1. Identification

##### Product identifier

NATURAL ISOVALERALDEHYDE

Substance name: NATURAL ISOVALERALDEHYDE  
 CAS No: 590-86-3

##### 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  
 Respiratory or skin sensitization: Skin Sens. 1  
 Specific target organ toxicity single exposure: STOT SE 3 (respiratory tract irritation)  
 Hazardous to the aquatic environment: Aquatic Acute 2  
 Hazardous to the aquatic environment: Aquatic Chronic 2

##### Label elements

###### **29 CFR Part 1910.1200**

**Signal word:** Danger

**Pictograms:**



##### **Hazard statements**

Highly flammable liquid and vapor  
 May cause an allergic skin reaction  
 Causes serious eye irritation  
 May cause respiratory 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.

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**NATURAL ISOVALERALDEHYDE**

Revision date: 01/28/2022

Product code: 269200US

Page 2 of 9

Take precautionary measures against static discharge.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If on skin: Wash with plenty of Water and soap.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Call a poison center/doctor if you feel unwell.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/container to Organic waste.

**Hazards not otherwise classified**

No information available.

**3. Composition/information on ingredients****Substances**

Sum formula: C5 H10 O  
Molecular weight: 86,13

**Hazardous components**

CAS No	Components	Quantity
590-86-3	NATURAL ISOVALERALDEHYDE	100 %

**4. First-aid measures****Description of first aid measures****After inhalation**

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

**After ingestion**

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

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### NATURAL ISOVALERALDEHYDE

Revision date: 01/28/2022

Product code: 269200US

Page 3 of 9

#### **Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), 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**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

#### **Additional information**

Use water spray/stream to protect personnel and to cool endangered containers. Suppress gases/vapors/mists with water spray jet. 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. Provide adequate ventilation. Do not breathe gas/fume/vapor/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

#### **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**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fume/vapor/spray.

##### **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**

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. 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 locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### NATURAL ISOVALERALDEHYDE

Revision date: 01/28/2022

Product code: 269200US

Page 4 of 9

#### 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



#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fume/vapor/spray.

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

##### Eye/face protection

Suitable eye protection: goggles.

##### Hand protection

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 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: Colourless to pale yellow

#### Changes in the physical state

Melting point/freezing point: -51 °C  
 Boiling point or initial boiling point and boiling range: 92 °C  
 Flash point: -1 °C

#### Flammability

Solid/liquid: not applicable  
 Gas: not applicable

#### Explosive properties

The product is not: Explosive.

Lower explosion limits: 1,4 vol. %  
 Upper explosion limits: 5,8 vol. %  
 Auto-ignition temperature: 210 °C  
 Decomposition temperature: not determined

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### NATURAL ISOVALERALDEHYDE

Revision date: 01/28/2022

Product code: 269200US

Page 5 of 9

pH-Value (at 20 °C):	3,1
Viscosity / dynamic: (at 20 °C)	0,69 mPa·s
Water solubility: (at 20 °C)	15 g/L
<b>Solubility in other solvents</b> not determined	
Partition coefficient n-octanol/water:	1,5
Vapor pressure: (at 20 °C)	61 hPa
Density (at 20 °C):	0,80 g/cm <sup>3</sup>
Relative vapour density: (at 20 °C)	2,97

#### Other information

##### Information with regard to physical hazard classes

Oxidizing properties  
The product is not: oxidising.

##### Other safety characteristics

Solvent content:	0%
Solid content:	0%
Evaporation rate:	not determined

## 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.

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### NATURAL ISOVALERALDEHYDE

Revision date: 01/28/2022

Product code: 269200US

Page 6 of 9

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
590-86-3	NATURAL ISOVALERALDEHYDE				
	oral	LD50 mg/kg	5740	Rat	REACH Dossier OECD 401
	dermal	LD50 mg/kg	2534	Rabbit	REACH Dossier OECD 402
	inhalation (4 h) vapour	LC50	42,7 mg/l	Rat	REACH Dossier OECD 403

#### **Irritation and corrosivity**

Causes serious eye irritation

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

#### **Sensitizing effects**

May cause an allergic skin reaction (NATURAL ISOVALERALDEHYDE)

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

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

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

May cause respiratory irritation (NATURAL ISOVALERALDEHYDE)

#### **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.

#### **Information on other hazards**

##### **Endocrine disrupting properties**

No information available.

#### **Further information**

This substance is classified as hazardous according to Regulation (EC) No 1272 (2008).

## 12. Ecological information

#### **Ecotoxicity**

Toxic to aquatic life with long lasting effects.

CAS No	Components					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
590-86-3	NATURAL ISOVALERALDEHYDE					
	Acute fish toxicity	LC50 mg/l	3,25	96 h Pimephales promelas (fathead minnow)	REACH Dossier	OECD 203
	Acute algae toxicity	ErC50	113 mg/l	72 h Desmodesmus subspicatus	REACH Dossier	German Industrial Standard DIN 38412,
	Acute crustacea toxicity	EC50	177 mg/l	48 h Daphnia magna (Big water flea)	REACH Dossier	Directive 79/831 EEC, C2

#### **Persistence and degradability**

The product has not been tested.

#### **Bioaccumulative potential**

The product has not been tested.

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### NATURAL ISOVALERALDEHYDE

Revision date: 01/28/2022

Product code: 269200US

Page 7 of 9

#### Partition coefficient n-octanol/water

CAS No	Components	Log Pow
590-86-3	NATURAL ISOVALERALDEHYDE	1,5

#### 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.

No information available.

#### Other adverse effects

No information available.

#### Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

### 13. Disposal considerations

#### Waste treatment methods

##### **Disposal recommendations**

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

##### **Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### 14. Transport information

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

**UN number or ID number:** UN 2058  
**Proper shipping name:** VALERALDEHYDE  
**Transport hazard class(es):** 3  
**Packing group:** II  
 Hazard label: 3



#### Marine transport (IMDG)

**UN number or ID number:** UN 2058  
**UN proper shipping name:** VALERALDEHYDE  
**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)

**UN number or ID number:** UN 2058  
**UN proper shipping name:** VALERALDEHYDE

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**NATURAL ISOVALERALDEHYDE**

Revision date: 01/28/2022

Product code: 269200US

Page 8 of 9

**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: Yes



Danger releasing substance: ISOVALERALDEHYD

**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:

NATURAL ISOVALERALDEHYDE (590-86-3): Fire hazard, Immediate (acute) health hazard

**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: 28.01.2022

Revision No: 102

**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



**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**NATURAL ISOVALERALDEHYDE**

Revision date: 01/28/2022

Product code: 269200US

Page 9 of 9

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  
MFAAG: 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>

**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.