

according to Regulation (EC) No 1907/2006

### **NATURAL 3-METHYL BUTANOL**

Revision date: 28.09.2022 Product code: 205710 Page 1 of 12

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

#### 1.1. Product identifier

NATURAL 3-METHYL BUTANOL

Substance name: NATURAL ISOAMYL ALCOHOL

CAS No: 123-51-3 Index No: 603-006-00-7 EC No: 204-633-5

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

#### Use of the substance/mixture

For Flavour use for food and feed only

### 1.3. 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

1.4. Emergency telephone +49 2822 68561 99

number:

### **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

### Regulation (EC) No 1272/2008

Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335

Full text of hazard statements: see SECTION 16.

#### 2.2. Label elements

### **Regulation (EC) No 1272/2008**

Signal word: Danger

Pictograms:







### **Hazard statements**

H226 Flammable liquid and vapour. H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

### **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

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	smoking.	
P233	Keep container tightly closed.	
P240	Ground and bond container and receiving equipment.	
P241	Use explosion-proof electrical/ventilating/lighting equipment.	
P242	Use non-sparking tools.	
P243	Take action to prevent static discharges.	
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.	
P264	Wash hands thoroughly after handling.	
P271	Use only outdoors or in a well-ventilated area.	
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing	
	protection.	
P302+P352	IF ON SKIN: Wash with plenty of Water and soap.	
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with	
	water or shower.	
P332+P313	If skin irritation occurs: Get medical advice/attention.	
P362+P364	Take off contaminated clothing and wash it before reuse.	
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
P312	Call a POISON CENTER/doctor if you feel unwell.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if	
	present and easy to do. Continue rinsing.	
P310	Immediately call a POISON CENTER/doctor.	
P370+P378	In case of fire: Use Water spray jet / Carbon dioxide (CO2) / Extinguishing powder / Foam	1
	to extinguish.	
P233	Keep container tightly closed.	
P403+P235	Store in a well-ventilated place. Keep cool.	
P405	Store locked up.	

# Special labelling of certain mixtures

**EUH066** Repeated exposure may cause skin dryness or cracking.

Dispose of contents/container to organic waste.

## 2.3. Other hazards

P501

No information available.

## **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

C5 H12 O Sum formula: Molecular weight: 88,15 g/mol

## Relevant ingredients

CAS No	Chemical name	Chemical name				
	EC No Index No REACH No					
	Classification (Regulation (EC) No 1272/2008)					
123-51-3	NATURAL ISOAMYL ALCOHOL					
	204-633-5 603-006-00-7					
	Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H226 H332 H315 H318 H335 EUH066					

Full text of H and EUH statements: see section 16.

### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity			
	Specific Conc. Limits, M-factors and ATE					
123-51-3	204-633-5	NATURAL ISOAMYL ALCOHOL	100 %			
	1	= 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = al: LD50 = >5000 mg/kg				



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#### **SECTION 4: First aid measures**

#### 4.1. 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. If skin irritation occurs: Get medical advice/attention.

#### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

#### After ingestion

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

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

No information available.

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

Treat symptomatically.

## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

#### Suitable extinguishing media

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

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

Flammable. Vapours can form explosive mixtures with air.

#### 5.3. Advice for firefighters

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

#### **Additional information**

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

## **SECTION 6: Accidental release measures**

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

## General advice

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

## 6.2. Environmental precautions

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

### 6.3. 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.

### 6.4. Reference to other sections

Safe handling: see section 7



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Personal protection equipment: see section 8

Disposal: see section 13

#### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

#### Advice on safe handling

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

#### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can 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.

### 7.2. 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 exhaustion 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.

### Hints on joint storage

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

### 7.3. Specific end use(s)

For Flavour use for food and feed only

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

#### Occupational exposure limit values

CAS No	Name of agent	ppm	mg/m³	fib/cm³	Category	Origin
123-51-3	Isoamyl alcohol	5	18		TWA (8 h)	
		10	37		STEL (15 min)	

## **DNEL/DMEL values**

CAS No	Name of agent							
DNEL type		Exposure route	Effect	Value				
123-51-3	NATURAL ISOAMYL ALCOHOL							
Consumer DNE	EL, long-term	inhalation	local	13 mg/m³				
Consumer DNE	EL, acute	inhalation	local	218 mg/m³				
Consumer DNE	EL, long-term	oral	systemic	12,5 mg/kg bw/day				
Worker DNEL,	long-term	inhalation	local	73,16 mg/m³				
Worker DNEL,	acute	inhalation	local	292 mg/m³				

## 8.2. Exposure controls



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#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/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. Suitable gloves type: Butyl caoutchouc (butyl rubber) / FKM (fluoro rubber)

#### Skin protection

Use of protective clothing.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state: Liquid Colour: colourless

Melting point/freezing point:

Boiling point or initial boiling point and

132 °C

boiling range:

Flammability:

Lower explosion limits:

1,2 vol. %

Upper explosion limits:

10,5 vol. %

Flash point:

42 °C

Auto-ignition temperature:

Decomposition temperature:

pH-Value (at 25 °C):

1,2 vol. %

42 °C

42 °C

340 °C

5,6

Water solubility: (at 20 °C)

Solubility in other solvents

not determined

Partition coefficient n-octanol/water: 1,28 Vapour pressure: 2,7 hPa

(at 20 °C)

Vapour pressure: 45 hPa

(at 50 °C)

Density (at 20 °C): 0,81 g/cm³
Relative vapour density: 3,04

(at 20 °C)

### 9.2. Other information

#### Information with regard to physical hazard classes

28 a/l



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Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

#### Other safety characteristics

Evaporation rate: not determined Solid content: 0
Viscosity / dynamic: 4,3 mPa·s (at 20 °C)

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Flammable.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

Exothermic reaction with: Oxidising agent. Formation of explosive mixtures with: Air.

#### 10.4. Conditions to avoid

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

#### 10.5. Incompatible materials

No information available.

#### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

## **SECTION 11: Toxicological information**

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

## **Acute toxicity**

Harmful if inhaled.

CAS No	Chemical name	Chemical name								
	Exposure route	Dose		Species	Source	Method				
123-51-3	NATURAL ISOAMYL ALCOHOL									
	oral	LD50 mg/kg	>5000	Rat	REACH Registr	eation OECD 401				
	dermal	LD50 mg/kg	3216	Rabbit	REACH Registr	ration OECD 402				
	inhalation vapour	ATE	11 mg/l							
	inhalation dust/mist	ATE	1,5 mg/l							

#### Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye damage.

Repeated exposure may cause skin dryness or cracking.

### Sensitising effects

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

### Carcinogenic/mutagenic/toxic effects for reproduction

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

 $\label{lem:carcinogenicity: Based on available data, the classification criteria are not met. \\$ 

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

### STOT-single exposure

May cause respiratory irritation. (NATURAL ISOAMYL ALCOHOL)

### STOT-repeated exposure

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

#### Aspiration hazard

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

## 11.2. Information on other hazards

#### **Further information**

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

## **SECTION 12: Ecological information**

#### 12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name								
	Aquatic toxicity	Dose	Dose		Species	Source	Method		
123-51-3	NATURAL ISOAMYL ALCOHOL								
	Acute fish toxicity	LC50	700 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	REACH Registration	OECD 203		
	Acute algae toxicity	ErC50 mg/l	>500	72 h	Desmodesmus subspicatus	REACH Registration	DIN 38412 L9 (BASF 1989)		
	Acute crustacea toxicity	EC50	255 mg/l		Daphnia magna (Big water flea)	REACH Registration	DIN 38412 L11 (BASF 1990)		
	Acute bacteria toxicity	EC50 mg/l ( )	>1000	3 h	Activated sludge	REACH Registration	OECD 209		

### 12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name							
	Method	Value	d	Source				
	Evaluation		-					
123-51-3	NATURAL ISOAMYL ALCOHOL							
	OECD 301F	84%	27	REACH Registration				
	Readily biodegradable (according to OECD criteria).							
	OECD 301F	82%	11	REACH Registration				
	Readily biodegradable (according to OECD crite	eria).						
	OECD 301F	47%	5	REACH Registration				
	Readily biodegradable (according to OECD criteria).							

### 12.3. Bioaccumulative potential

The product has not been tested.

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
123-51-3	NATURAL ISOAMYL ALCOHOL	1,28

### 12.4. Mobility in soil

The product has not been tested.

## 12.5. Results of PBT and vPvB assessment



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This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

The product has not been tested.

### 12.6. Endocrine disrupting properties

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

### 12.7. Other adverse effects

No information available.

#### **Further information**

Avoid release to the environment.

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

#### **Disposal recommendations**

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

#### List of Wastes Code - residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused

products; organic wastes containing hazardous substances; hazardous waste

#### List of Wastes Code - used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused

products; organic wastes containing hazardous substances; hazardous waste

#### List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND

PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by

hazardous substances; hazardous waste

### Contaminated packaging

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

## **SECTION 14: Transport information**

#### Land transport (ADR/RID)

14.1. UN number or ID number:UN 110514.2. UN proper shipping name:PENTANOLS

14.3. Transport hazard class(es):314.4. Packing group:IIIHazard label:3



Classification code: F1
Limited quantity: 5 L
Excepted quantity: E1
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

### Other applicable information (land transport)

E1

### Inland waterways transport (ADN)

**14.1. UN number or ID number:** UN 1105 **14.2. UN proper shipping name:** PENTANOLS

14.3. Transport hazard class(es): 3
14.4. Packing group: III



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Hazard label:



Classification code: F1
Limited quantity: 5 L
Excepted quantity: E1

Other applicable information (inland waterways transport)

E1

Marine transport (IMDG)

14.1. UN number or ID number:UN 110514.2. UN proper shipping name:PENTANOLS

14.3. Transport hazard class(es):314.4. Packing group:IIIHazard label:3



Special Provisions: 223
Limited quantity: 5 L
Excepted quantity: E1
EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:UN 110514.2. UN proper shipping name:PENTANOLS

14.3. Transport hazard class(es):314.4. Packing group:IIIHazard label:3



Special Provisions:

Limited quantity Passenger:

Passenger LQ:

Excepted quantity:

A3

10 L

Y344

Excepted quantity:

E1

IATA-packing instructions - Passenger:355IATA-max. quantity - Passenger:60 LIATA-packing instructions - Cargo:366IATA-max. quantity - Cargo:220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Combustible liquid.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

## **SECTION 15: Regulatory information**

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

**EU** regulatory information



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Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40

Directive 2010/75/EU on industrial

100 % (810 g/l)

emissions:

Directive 2004/42/EC on VOC in

100 % (810 g/l)

paints and varnishes:

Information according to Directive

P5c FLAMMABLE LIQUIDS

2012/18/EU (SEVESO III):

**Additional information** 

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

**National regulatory information** 

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### **SECTION 16: Other information**

#### Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,11,13,14,15,16.



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#### Abbreviations and acronyms

Flam. Liq: Flammable liquid Acute Tox: Acute toxicity Skin Irrit: Skin irritation Eye Dam: Eye damage

STOT SE: Specific target organ toxicity - single exposure

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).

## Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

EUH066 Repeated exposure may cause skin dryness or cracking.

### **Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of



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product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

### Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
	For Flavour use for food and feed only	-	-	-	-	-	-	-	Flavour

LCS: Life cycle stages PC: Product categories

ERC: Environmental release categories

TF: Technical functions

SU: Sectors of use

PROC: Process categories
AC: Article categories