

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.8)

NATURAL 2-METHYL BUTYRIC ACID

Revision date: 12/09/2022

Product code: 269500WW

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1. Identification

Product identifier

NATURAL 2-METHYL BUTYRIC ACID

Substance name: NATURAL 2-METHYL BUTYRIC ACID
 CAS No: 116-53-0

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

For Flavour use for food and feed only

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

UN GHS (ST/SG/AC.10/11/Rev.8)

Hazard categories:
 Acute toxicity: Acute Tox. 4
 Acute toxicity: Acute Tox. 4
 Skin corrosion/irritation: Skin Corr. 1B
 Hazardous to the aquatic environment: Aquatic Acute 3
 Hazard Statements:
 Harmful if swallowed
 Causes severe skin burns and eye damage
 Harmful to aquatic life
 Harmful in contact with skin

Label elements

UN GHS (ST/SG/AC.10/11/Rev.8)

Signal word: Danger

Pictograms:



Hazard statements

H227	Combustible liquid
H302+H312	Harmful if swallowed or in contact with skin
H314	Causes severe skin burns and eye damage
H402	Harmful to aquatic life

Precautionary statements

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.

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P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P316	Get emergency medical help immediately.
P317	Get medical help.
P302+P352	If on skin: Wash with plenty of water.
P354	Immediately rinse with water for several minutes.
P361	Take off immediately all contaminated clothing.
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.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378	In case of fire: Use Extinguishing powder / Foam / Carbon dioxide (CO ₂) to extinguish.
P403	Store in a well-ventilated place.
P405	Store locked up.
P501	Dispose of contents/container to Organic waste.

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Substances

Sum formula:	C ₅ H ₁₀ O ₂
Molecular weight:	102,13

Hazardous components

CAS No	Components	Quantity
	Classification (UN GHS (ST/SG/AC.10/11/Rev.8))	
116-53-0	NATURAL 2-METHYL BUTYRIC ACID	100 %
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 3; H312 H302 H314 H402	

4. First-aid measures

Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation

Provide fresh air. Medical treatment necessary.

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

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 water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk. Rinse mouth immediately and drink plenty of water.

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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**

Co-ordinate fire-fighting measures to the fire surroundings.

Specific hazards arising from the chemical

Non-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**

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 to enter into surface water or drains.

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

No special fire protection measures are necessary.

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.

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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.

Hints on joint storage

No special measures are necessary.

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

Suitable gloves type: NBR (Nitrile rubber) + Natural fibres (e.g. cotton)

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

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Color:	Colourless to pale yellow
Melting point/freezing point:	-90 °C
Boiling point or initial boiling point and boiling range:	176 °C
Flammability	
Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	1,6 vol. %
Upper explosion limits:	7,3 vol. %
Flash point:	77 °C
Auto-ignition temperature:	420 °C
Decomposition temperature:	not determined
pH-Value (at 20 °C):	3,1

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Viscosity / kinematic: (at 20 °C)	2,2 mm ² /s
Water solubility: (at 20 °C)	45 g/L
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	1,8
Vapor pressure: (at 20 °C)	1,67 hPa
Density (at 20 °C):	0,94 g/cm ³
Relative vapour density: (at 20 °C)	3,52

Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive. not hazard of explosion according to EU A.14

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) 2,1 mPa·s

10. Stability and reactivity

Reactivity

No hazardous reaction when handled and stored according to provisions.

Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

No known hazardous reactions.

Conditions to avoid

none/none

Incompatible materials

No information available.

Hazardous decomposition products

No known hazardous decomposition products.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Harmful if swallowed

Harmful in contact with skin

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CAS No	Components				
	Exposure route	Dose	Species	Source	Method
116-53-0	NATURAL 2-METHYL BUTYRIC ACID				
	oral	LD50 mg/kg	1750	Rat	REACH Registration OECD 401
	dermal	LD50 mg/kg	1367	Rabbit	REACH Registration OECD 402

Irritation and corrosivity

Causes severe skin burns and eye damage

Causes serious eye damage

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.

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

The product is not: Ecotoxic.

CAS No	Components					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
116-53-0	NATURAL 2-METHYL BUTYRIC ACID					
	Acute fish toxicity	LC50 mg/l	>1000	96 h	Danio rerio (zebrafish)	REACH Registration OECD 203
	Acute algae toxicity	ErC50 mg/l	73,2	72 h	Pseudokirchneriella subcapitata	REACH Registration OECD 201
	Acute crustacea toxicity	EC50 mg/l	88,1	48 h	Daphnia magna (Big water flea)	REACH Registration OECD 202

Persistence and degradability

The product has not been tested.

CAS No	Components			
	Method	Value	d	Source
	Evaluation			
116-53-0	NATURAL 2-METHYL BUTYRIC ACID			
	OECD 301D	68%	10	REACH Registration
	Readily biodegradable (according to OECD criteria).			

Bioaccumulative potential

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The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Components	Log Pow
116-53-0	NATURAL 2-METHYL BUTYRIC ACID	1,8

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

Marine transport (IMDG)

UN number or ID number: UN 3265
UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Transport hazard class(es): 8
Packing group: II
 Hazard label: 8



Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number: UN 3265
UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Transport hazard class(es): 8
Packing group: II
 Hazard label: 8



Special Provisions: A3 A803
 Limited quantity Passenger: 0.5 L
 Passenger LQ: Y840
 Excepted quantity: E2
 IATA-packing instructions - Passenger: 851
 IATA-max. quantity - Passenger: 1 L

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IATA-packing instructions - Cargo: 855
IATA-max. quantity - Cargo: 30 L

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

Warning: strongly corrosive.

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

not applicable

15. Regulatory information**National regulatory information**

Employment restrictions: Observe employment restrictions for young people.
Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

16. Other information**Changes**

This data sheet contains changes from the previous version in section(s): 11.

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

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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.