

# SAFETY DATA SHEET



Isopentanoic acid  
11560

Version / Revision 1  
Supersedes Version -

Revision Date 04-Sep-2020  
Issuing date 04-Sep-2020

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

### 1.1. Product identifier

Identification of the  
substance/preparation

**Isopentanoic acid**

CAS-No -  
EC No. -  
Registration number (REACH) -

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

Identified uses Intermediate  
Uses advised against None

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

Company/Undertaking **OQ Chemicals GmbH**  
Identification Rheinpromenade 4A  
D-40789 Monheim  
Germany

Product Information Product Stewardship  
FAX: +49 (0)208 693 2053  
email: sc.psq@oq.com

### 1.4. Emergency telephone number

Emergency telephone number +44 (0) 1235 239 670 (UK)  
available 24/7

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

This mixture is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation)

Skin corrosion/irritation Category 1B, H314  
Serious eye damage/eye irritation Category 1, H318  
Environmental hazard Aquatic Chronic 3; H412

#### Additional information

For full text of Hazard- and EU Hazard-statements see SECTION 16.

### 2.2. Label elements

Labelling according to Regulation 1272/2008/EC and its amendments (CLP Regulation).

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## Hazard pictograms



### Signal word

**Danger**

### Hazard statements

H314: Causes severe skin burns and eye damage.  
H412: Harmful to aquatic life with long lasting effects.

### Precautionary statements

P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P273: Avoid release to the environment.  
P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P533: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
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.  
P405: Store locked up.  
P501: Dispose of contents/container in accordance with local regulation.

### contains

n-Valeric acid (CAS 109-52-4), 2-Methylbutyric acid (CAS 116-53-0)

## 2.3. Other hazards

Components of the product may be absorbed into the body by inhalation and ingestion  
Vapour/air-mixtures are explosive at intense warming

### PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

Component	CAS-No	REACH-No	1272/2008/EC	Concentration (%)
Valeric acid	109-52-4	01-2119448010-56	Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	< 70
2-Methylbutyric acid	116-53-0	01-2119959862-23	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318	20 - 40
Isovaleric acid	503-74-2	01-2119959864-19	Skin Corr. 1B; H314 Eye Dam. 1; H318	< 1

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For full text of Hazard- and EU Hazard-statements see SECTION 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation

Keep at rest. Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.

#### Skin

Wash off immediately with soap and plenty of water. When symptoms persist or in all cases of doubt seek medical advice.

#### Eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

#### Ingestion

Call a physician immediately. Do not induce vomiting without medical advice.

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

#### Main symptoms

central nervous system depression, unconsciousness, shortness of breath, vomiting, cough, dizziness, nausea, gastrointestinal discomfort.

#### Special hazard

Lung irritation, Lung oedema, Dermatitis.

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

#### General advice

Remove contaminated, soaked clothing immediately and dispose of safely. First aider needs to protect himself.

Treat symptomatically. If ingested, flush stomach and compensate acidosis.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water spray

#### Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

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

Under conditions giving incomplete combustion, hazardous gases produced may consist of:

carbon monoxide (CO)

carbon dioxide (CO<sub>2</sub>)

Combustion gases of organic materials must in principle be graded as inhalation poisons

Vapours are heavier than air and may spread along floors

Vapour/air-mixtures are explosive at intense warming



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## 5.3. Advice for firefighters

### Special protective equipment for firefighters

Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

### Precautions for firefighting

Cool containers / tanks with water spray. Keep people away from and upwind of fire. Dike and collect water used to fight fire. Water run-off and vapor cloud may be corrosive. Water run-off can cause environmental damage.

## SECTION 6: Accidental release measures

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

For non-emergency personnel: For personal protective equipment see section 8. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Keep away from heat and sources of ignition.

For emergency responders: Personal protection see section 8.

### 6.2. Environmental precautions

Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant). Water runoff can cause environmental damage.

### 6.3. Methods and material for containment and cleaning up

#### Methods for containment

Stop the flow of material, if possible without risk. Dike spilled material, where this is possible.

#### Methods for cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local regulations. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

### 6.4. Reference to other sections

For personal protective equipment see section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Provide sufficient air exchange and/or exhaust in work rooms.

#### Hygiene measures

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

#### Advice on the protection of the environment

See Section 8: Environmental exposure controls.

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## Incompatible products

bases  
amines  
strong oxidizing agents

## 7.2. Conditions for safe storage, including any incompatibilities

### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material. Vapour/air-mixtures are explosive at intense warming.

### Technical measures/Storage conditions

Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care.

### Suitable material

stainless steel

### Unsuitable material

copper, nickel

### Temperature class

T2

## 7.3. Specific end use(s)

Intermediate

## SECTION 8: Exposure controls / personal protection

### 8.1. Control parameters

#### Exposure limits European Union

No exposure limits established

#### Exposure limits UK

No exposure limits established.

#### DNEL & PNEC

#### Valeric acid, CAS: 109-52-4

##### Workers

No data available

##### General population

No data available

##### Environment

No data available

#### 2-Methylbutyric acid, CAS: 116-53-0

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## Workers

No data available

## General population

No data available

## Environment

No data available

## Isovaleric acid, CAS: 503-74-2

### Workers

No data available

### General population

No data available

### Environment

<b>PNEC aqua - freshwater</b>	29,3 µg/l
<b>PNEC aqua - marine water</b>	2,93 µg/l
<b>PNEC aqua - intermittent releases</b>	0,293 mg/l
<b>PNEC STP</b>	22,4 mg/l
<b>PNEC sediment - freshwater</b>	117,3 µg/kg
<b>PNEC sediment - marine water</b>	11,7 µg/kg
<b>PNEC Air</b>	No hazard identified
<b>PNEC soil</b>	6,25 µg/kg
<b>Secondary poisoning</b>	No potential for bioaccumulation

## **8.2. Exposure controls**

### **Special adaptations (REACH)**

Not applicable.

### **Appropriate Engineering controls**

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

### **Personal protective equipment**

#### **General industrial hygiene practice**

Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Hygiene measures**

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

#### **Eye protection**

Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.

Equipment should conform to EN 166

#### **Hand protection**

Wear protective gloves. Recommendations are listed below. Other protective material may be used, depending on

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the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

<b>Suitable material</b>	nitrile rubber
<b>Evaluation</b>	according to EN 374: level 6
<b>Glove thickness</b>	approx 0,55 mm
<b>Break through time</b>	> 480 min
<b>Suitable material</b>	polyvinylchloride
<b>Evaluation</b>	Information derived from practical experience
<b>Glove thickness</b>	approx 0,8 mm

## Skin and body protection

Impervious clothing. Wear face-shield and protective suit for abnormal processing problems.

## Respiratory protection

Respirator with A filter. Full mask with above mentioned filter according to producers using requirements or self-contained breathing apparatus. Equipment should conform to EN 136 or EN 140 and EN 143.

## Environmental exposure controls

If possible use in closed systems. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	liquid
<b>Colour</b>	colourless
<b>Odour</b>	unpleasant
<b>Odour threshold</b>	No data available
<b>pH</b>	2,7 (37,5 g/l in water @ 20 °C (68 °F))
<b>Melting point/range</b>	< -34 °C (Pour point)
<b>Boiling point/range</b>	177 - 186 °C @ 1013 hPa
<b>Flash point</b>	77 - 84 °C
<b>Method</b>	ASTM D-7094
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	Does not apply, the substance is a liquid
<b>Lower explosion limit</b>	1,6 Vol %
<b>Upper explosion limit</b>	7,3 Vol %

### Vapour pressure

Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
~ 2	~ 0,2	~ 0,002	20	68	
~ 9	~ 0,9	~ 0,009	50	122	

**Vapour density** ~ 3,5 (Air = 1) @ 20 °C (68 °F)

### Relative density

Values	@ °C	@ °F	Method
0,94	20	68	DIN 51757

**Solubility** 37 - 45 g/l @ 20 °C, in water, OECD 105

**log Pow** 1,8 (calculated)

**Autoignition temperature** 410 - 435 °C

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Method	DIN 51794
Decomposition temperature	No data available
Viscosity	2,1 - 2,2 mPa*s @ 20 °C
Method	DIN 51562, dynamic
Explosive properties	Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties
Oxidizing properties	Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties

## 9.2. Other information

Molecular weight	102,13
Molecular formula	C <sub>5</sub> H <sub>10</sub> O <sub>2</sub>
Refractive index	1,405 - 1,408 @ 20 °C

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4. Conditions to avoid

Avoid contact with heat, sparks, open flame and static discharge. Avoid any source of ignition.

### 10.5. Incompatible materials

bases, amines, strong oxidizing agents.

### 10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure Ingestion, Inhalation, Eye contact, Skin contact

Acute toxicity				
Valeric acid (109-52-4)				
Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	4600 mg/kg	rat, male/female	OECD 401
Dermal	LD50	> 2000 mg/kg (24 h)	rat, male/female	OECD 402



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<b>2-Methylbutyric acid (116-53-0)</b>				
Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	1750 mg/kg	rat, male/female	OECD 401
Dermal	LD50	2228 mg/kg	rabbit male	OECD 402
Dermal	LD50	1367 mg/kg	rabbit female	OECD 402
Inhalative	LC0	8375 mg/m <sup>3</sup> (6 h)	rat, male/female	OECD 403

<b>Isovaleric acid (503-74-2)</b>				
Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	~ 2500 mg/kg	rat male female	OECD 401
Dermal	LD50	> 2000 mg/kg	rabbit male female	OECD 402
Inhalative	LC0	2060 mg/m <sup>3</sup> (7 h)	rat	OECD 403

## **Valeric acid, CAS: 109-52-4**

### **Assessment**

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

Acute oral toxicity

Acute dermal toxicity

STOT SE

An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration

## **2-Methylbutyric acid, CAS: 116-53-0**

### **Assessment**

The available data lead to the classification given in section 2

An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration

## **Isovaleric acid, CAS: 503-74-2**

### **Assessment**

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

Acute oral toxicity

Acute dermal toxicity

Acute inhalation toxicity

<b>Irritation and corrosion</b>				
<b>Valeric acid (109-52-4)</b>				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	corrosive		3 min
Eyes	rabbit	corrosive		

<b>2-Methylbutyric acid (116-53-0)</b>				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	corrosive	OECD 404	3 min

<b>Isovaleric acid (503-74-2)</b>				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	corrosive	OECD 404	1h

## **Valeric acid, CAS: 109-52-4**

### **Assessment**

The available data lead to the classification given in section 2

For respiratory irritation, no data are available

## **2-Methylbutyric acid, CAS: 116-53-0**

### **Assessment**

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The available data lead to the classification given in section 2  
Available skin corrosion data suffice for classification of eye corrosion without further testing  
For respiratory irritation, no data are available

## **Isovaleric acid, CAS: 503-74-2**

### **Assessment**

The available data lead to the classification given in section 2

<b>Sensitization</b>				
<b>Isovaleric acid (503-74-2)</b>				
Target Organ Effects	Species	Evaluation	Method	
Skin	Human experience	not sensitizing	OECD 406	1 %, in Petrolatum

## **Valeric acid, CAS: 109-52-4**

### **Assessment**

Skin sensitization was not tested due to the corrosive properties of the substance  
For skin sensitization, no data are available  
For respiratory sensitization, no data are available

## **2-Methylbutyric acid, CAS: 116-53-0**

### **Assessment**

Skin sensitization was not tested due to the corrosive properties of the substance  
For respiratory sensitization, no data are available

## **Isovaleric acid, CAS: 503-74-2**

### **Assessment**

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

Skin sensitization

For respiratory sensitization, no data are available

<b>Subacute, subchronic and prolonged toxicity</b>				
<b>Valeric acid (109-52-4)</b>				
Type	Dose	Species	Method	
no data available				

<b>2-Methylbutyric acid (116-53-0)</b>				
Type	Dose	Species	Method	
Subchronic toxicity	NOAEL: 5000 mg/kg/d (90d)	rat, male	Oral	read across

<b>Isovaleric acid (503-74-2)</b>				
Type	Dose	Species	Method	
Subchronic toxicity	NOAEL: 5000 mg/kg/d (90d)	rat, male		Oral read across
Subchronic toxicity	NOAEL: 1068 mg/kg/d (90d)	rat, male	OECD 408	Oral read across
Subchronic toxicity	NOAEL: 1431 mg/kg/d (90d)	rat, female	OECD 408	Oral read across

## **Valeric acid, CAS: 109-52-4**

### **Assessment**

Due to lack of data, a classification is not possible for:

STOT RE

## **2-Methylbutyric acid, CAS: 116-53-0**

### **Assessment**

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

STOT RE

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## Isovaleric acid, CAS: 503-74-2

### Assessment

Based on available data, the classification criteria are not met for:  
STOT RE

<b>Carcinogenicity, Mutagenicity, Reproductive toxicity</b>					
<b>Valeric acid (109-52-4)</b>					
Type	Dose	Species	Evaluation	Method	
Developmental Toxicity	NOAEL 50 mg/kg/d	rat		OECD 414, Oral	Developmental toxicity
Mutagenicity		Salmonella typhimurium	negative	OECD 471 (Ames)	In vitro study
Mutagenicity		CHO (Chinese Hamster Ovary) cells	positive	OECD 473 (Chromosomal Aberration)	In vitro study
Mutagenicity		CHO (Chinese Hamster Ovary) cells	positive	OECD 479 (SCE)	In vitro study
Mutagenicity		CHO (Chinese Hamster Ovary) cells	negative	OECD 476 (Mammalian Gene Mutation)	In vitro study
Mutagenicity		mouse	negative	OECD 474	in vivo

<b>2-Methylbutyric acid (116-53-0)</b>					
Type	Dose	Species	Evaluation	Method	
Mutagenicity		Salmonella typhimurium	negative	Ames test	read across
Developmental Toxicity	NOAEL 600 mg/kg/d	rat		OECD 414, Oral	read across

<b>Isovaleric acid (503-74-2)</b>					
Type	Dose	Species	Evaluation	Method	
Mutagenicity		Salmonella typhimurium	negative	OECD 471 (Ames)	read across
Mutagenicity		mouse	negative	OECD 474	read across
Developmental Toxicity	NOAEL 600 mg/kg/d	rat		OECD 414, Oral	Maternal toxicity, Developmental toxicity, Teratogenicity

## Valeric acid, CAS: 109-52-4

### CMR Classification

The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B

### Evaluation

In vitro tests did not show mutagenic effects

## 2-Methylbutyric acid, CAS: 116-53-0

### CMR Classification

The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B

### Evaluation

In vitro tests did not show mutagenic effects

## Isovaleric acid, CAS: 503-74-2

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## CMR Classification

The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B

## Evaluation

In vitro tests did not show mutagenic effects

Did not show reprotoxic effects in animal experiments

## Valeric acid, CAS: 109-52-4

### Main symptoms

central nervous system depression, unconsciousness, shortness of breath, vomiting.

### Target Organ Systemic Toxicant - Single exposure

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

STOT SE

### Target Organ Systemic Toxicant - Repeated exposure

Due to lack of data, a classification is not possible for:

STOT RE

### Aspiration toxicity

no data available

### Other adverse effects

Components of the product may be absorbed into the body by inhalation and ingestion.

## 2-Methylbutyric acid, CAS: 116-53-0

### Main symptoms

cough, dizziness, nausea, shortness of breath, unconsciousness, gastrointestinal discomfort.

### Target Organ Systemic Toxicant - Single exposure

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

STOT SE

### Target Organ Systemic Toxicant - Repeated exposure

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

STOT RE

### Aspiration toxicity

no data available

## Isovaleric acid, CAS: 503-74-2

### Main symptoms

cough, dizziness, nausea, shortness of breath, unconsciousness, gastrointestinal discomfort.

### Target Organ Systemic Toxicant - Single exposure

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

STOT SE

### Target Organ Systemic Toxicant - Repeated exposure

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

STOT RE

### Aspiration toxicity

Due to the viscosity, this product does not present an aspiration hazard

### Note

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute aquatic toxicity

#### Valeric acid (109-52-4)

Species	Exposure time	Dose	Method
Daphnia magna (Water flea)	48h	LC50: 88,1 mg/l	OECD 202 read across

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Pseudokirchneriella subcapitata	72h	EC50: 29,3 mg/l	OECD 201
Pimephales promelas (fathead minnow)	96h	LC50: 39 mg/l	OECD 203

## 2-Methylbutyric acid (116-53-0)

Species	Exposure time	Dose	Method
Danio rerio (Zebra fish)	96h	LC50: > 1000 mg/l	OECD 203
Bacteria / Sewage	24h	TTC: 1250 mg/l	ETAD Fermentation tube method

## Isovaleric acid (503-74-2)

Species	Exposure time	Dose	Method
Pimephales promelas (fathead minnow)	96h	LC50: 77 mg/l	OECD 203 read across
Daphnia magna (Water flea)	48h	EC50: 51,25 mg/l	DIN 38412, part 11 read across
Pseudokirchneriella subcapitata	72h	EC50: 29,3 mg/l	OECD 201 read across
Tetrahymena pyriformis	40 h	IC50: 224 mg/l (Growth inhibition)	

## Long term toxicity

### Valeric acid (109-52-4)

Type	Species	Dose	Method
Aquatic toxicity	Pseudokirchneriella subcapitata	NOAEC: 12,6 mg/l (3d)	OECD 201

## 12.2. Persistence and degradability

### Valeric acid, CAS: 109-52-4

#### Biodegradation

72 % (10 d), activated sludge, non-adapted, aerobic.

### 2-Methylbutyric acid, CAS: 116-53-0

#### Biodegradation

67,9 % (10 d), Sewage, domestic, non-adapted, Readily biodegradable, OECD 301 D.

### Isovaleric acid, CAS: 503-74-2

#### Biodegradation

58 - 66 % (8 d), activated sludge, aerobic, non-adapted, OECD 301 C.

## Abiotic Degradation

### Valeric acid (109-52-4)

Type	Result	Method
Hydrolysis	not expected	
Photolysis	No data available	

## 12.3. Bioaccumulative potential

### Valeric acid (109-52-4)

Type	Result	Method
log Pow	1,8	measured, OECD 117

### 2-Methylbutyric acid (116-53-0)

Type	Result	Method
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log Pow	1,8	measured, OECD 117
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<b>Isovaleric acid (503-74-2)</b>		
Type	Result	Method
log Pow	1,7	measured, OECD 117
BCF	3,162	calculated

## 12.4. Mobility in soil

<b>Valeric acid (109-52-4)</b>		
Type	Result	Method
Surface tension	51,6 mN/m (1 g/l @ 20°C (68°F))	OECD 115
Adsorption/Desorption	no data available	
Distribution to environmental compartments	no data available	

<b>2-Methylbutyric acid (116-53-0)</b>		
Type	Result	Method
Surface tension	64,2 mN/m (1 g/l @ 20°C (68°F))	OECD 115

<b>Isovaleric acid (503-74-2)</b>		
Type	Result	Method
Surface tension	63,3 mN/m (1 g/l @ 20°C (68°F))	OECD 115

## 12.5. Results of PBT and vPvB assessment

### **Valeric acid, CAS: 109-52-4**

#### **PBT and vPvB assessment**

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

### **2-Methylbutyric acid, CAS: 116-53-0**

#### **PBT and vPvB assessment**

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

### **Isovaleric acid, CAS: 503-74-2**

#### **PBT and vPvB assessment**

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

## 12.6. Other adverse effects

### **Valeric acid, CAS: 109-52-4**

No data available

### **2-Methylbutyric acid, CAS: 116-53-0**

No data available

### **Isovaleric acid, CAS: 503-74-2**

No data available

#### **Note**

Avoid release to the environment.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Product Information

Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.

Hazardous waste according to European Waste Catalogue (EWC)

#### Uncleaned empty packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

## SECTION 14: Transport information

### ADR/RID

<b>14.1. UN number</b>	UN 3265
<b>14.2. UN proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s. (2-Methylbutyric acid / n-Valeric acid)
<b>14.3. Transport hazard class(es)</b>	8
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	no
<b>14.6. Special precautions for user</b>	
ADR Tunnel restriction code	(E)
Classification Code	C3
Hazard Number	80

### ADN

ADN Container

<b>14.1. UN number</b>	UN 3265
<b>14.2. UN proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s. (2-Methylbutyric acid / n-Valeric acid)
<b>14.3. Transport hazard class(es)</b>	8
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	no
<b>14.6. Special precautions for user</b>	
Classification Code	C3
Hazard Number	80

### ADN

ADN Tanker

<b>14.1. UN number</b>	UN 3265
<b>14.2. UN proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s. (2-Methylbutyric acid / n-Valeric acid)
<b>14.3. Transport hazard class(es)</b>	8
Subsidiary Risk	N3
<b>14.4. Packing group</b>	II

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14.5. Environmental hazards no  
14.6. Special precautions for user  
Classification Code C3

## ICAO-TI / IATA-DGR

14.1. UN number UN 3265  
14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (2-Methylbutyric acid / n-Valeric acid)  
14.3. Transport hazard class(es) 8  
14.4. Packing group II  
14.5. Environmental hazards no  
14.6. Special precautions for user no data available

## IMDG

14.1. UN number UN 3265  
14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (2-Methylbutyric acid / n-Valeric acid)  
14.3. Transport hazard class(es) 8  
14.4. Packing group II  
14.5. Environmental hazards no  
14.6. Special precautions for user  
EmS F-A, S-B  
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code not applicable

## **SECTION 15: Regulatory information**

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

### Regulation 1272/2008, Annex VI

#### Valeric acid, CAS: 109-52-4

Classification Skin Corr. 1B; H314  
Aquatic Chronic 3; H412  
Hazard pictograms GHS05 Corrosion  
Signal word Danger  
Hazard statements H314, H412

#### DI 2012/18/EU (Seveso III)

Category not subject

#### DI 1999/13/EC (VOC Guideline)

Component	Status
Valeric acid CAS: 109-52-4	regulated
2-Methylbutyric acid	regulated



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CAS: 116-53-0	
Isovaleric acid CAS: 503-74-2	regulated

## International Inventories

### **Valeric acid, CAS: 109-52-4**

AICS (AU)  
DSL (CA)  
IECSC (CN)  
EC-No. 2036772 (EU)  
ENCS (2)-608 (JP)  
ISHL (2)-608 (JP)  
KECI KE-35263 (KR)  
INSQ (MX)  
PICCS (PH)  
TSCA (US)  
NZIoC (NZ)  
TCSI (TW)

### **2-Methylbutyric acid, CAS: 116-53-0**

AICS (AU)  
DSL (CA)  
IECSC (CN)  
EC-No. 2041452 (EU)  
ENCS (2)-608 (JP)  
ISHL (2)-608 (JP)  
KECI KE-23544 (KR)  
INSQ (MX)  
PICCS (PH)  
TSCA (US)  
NZIoC (NZ)  
TCSI (TW)

### **Isovaleric acid, CAS: 503-74-2**

AICS (AU)  
DSL (CA)  
IECSC (CN)  
EC-No. 2079753 (EU)  
ENCS (2)-608 (JP)  
ISHL (2)-608 (JP)  
KECI KE-23545 (KR)  
INSQ (MX)  
PICCS (PH)  
TSCA (US)  
NZIoC (NZ)  
TCSI (TW)

## National regulatory information Great Britain

### **Releases to air (Pollution Inventory Substances)**

not subject

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## Releases to water (Pollution Inventory Substances)

not subject

## Releases to sewer (Pollution Inventory Substances)

not subject

For details and further information please refer to the original regulation

## 15.2. Chemical safety assessment

The Chemical Safety Report (CSR) is not required.

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H412: Harmful to aquatic life with long lasting effects.

### Abbreviations

A table of terms and abbreviations can be found under the following link:

[http://echa.europa.eu/documents/10162/13632/information\\_requirements\\_r20\\_en.pdf](http://echa.europa.eu/documents/10162/13632/information_requirements_r20_en.pdf)

### Training advice

For effective first-aid, special training / education is needed.

### Sources of key data used to compile the datasheet

Information contained in this safety data sheet is based on OQ owned data and public sources deemed valid or acceptable. The absence of data elements required by OSHA, ANSI or Annex II, Regulation 1907/2006/EC indicates, that no data meeting these requirements is available.

### Further information for the safety data sheet

Changes against the previous version are marked by \*\*\*. Observe national and local legal requirements. For more information, other material safety data sheets or technical data sheets please consult the OQ homepage ([www.chemicals.oq.com](http://www.chemicals.oq.com)).

### Disclaimer

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**End of Safety Data Sheet**

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