according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



2-Methylpentanoic acid

10110

Version / Revision6.01Revision Date25-Jan-2023Supersedes Version6.00***Issuing date25-Jan-2023

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

1.1. Product identifier

Identification of the substance/preparation

2-Methylpentanoic acid

Chemical Name 2-Methylvaleric acid

CAS-No 97-61-0 **EC No.** 202-594-9

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

Identified uses Transported isolated intermediate (1907/2006)

Uses advised against None

1.3. Details of the supplier of the safety data sheet

Company/Undertaking

Identification

OQ Chemicals GmbH 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 substance is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation)

Skin corrosion/irritation Category 1C, H314 Serious eye damage/eye irritation Category 1, H318

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).

Hazard pictograms

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Signal word Danger

Hazard statements H314: Causes severe skin burns and eye damage.

Precautionary statements P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce

vomiting.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all

contaminated clothing. Rinse skin with water or shower.

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.

2.3. Other hazards

Vapour/air-mixtures are explosive at intense warming

Components of the product may be absorbed into the body through the skin

PBT and vPvB assessment Not required

Endocrine disrupting

assessments

The substance is not listed on the candidate list according to Art. 59(1), REACh. The substance was not assessed as having endocrine disrupting properties

according to regulation 2017/2100/EU or 2018/605/EU.

SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	1272/2008/EC	Concentration (%)
2-Methylvaleric acid	97-61-0	Skin Corr. 1C; H314	> 98,5
		Eye Dam. 1; H318	

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.

Skir

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.

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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

cough, shortness of breath, nausea.

Special hazard

Lung irritation.

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 (CO2), 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 (CO2)

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

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. Water run-off and vapor cloud may be corrosive. Dike and collect water used to fight fire. Keep people away from and upwind of fire.

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.

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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).

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.

Incompatible products

bases amines 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.

Temperature class

T2

7.3. Specific end use(s)

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Transported isolated intermediate (1907/2006)

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

This substance is registered as intermediate under strictly controlled conditions.

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Workers

No data available

General population

No data available

Environment

No data available

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

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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

Suitable material nitrile rubber

Evaluation according to EN 374: level 6

Glove thickness approx 0,55 mm

Break through time > 480 min

Suitable material polyvinylchloride

Evaluation Information derived from practical experience

Glove thickness 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. Observe the exposure limits, clean exhaust air if needed. 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.

Additional advice

Further details on substance data can be found in the registration dossier under the following link: http://echa.europa.eu/information-on-chemicals/registered-substances.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state liquid
Colour colourless
Unpleasant
Odour threshold No data available
Melting point/freezing point
Method DIN ISO 3016

Boiling point or initial boiling

point and boiling range

Method OECD 103

Flammability Even if not classified as flammable, the product is capable of catching fire or

being set on fire.***

196 °C @ 1013 hPa

Lower explosion limit 1,3 Vol %

Upper explosion limitNo data availableFlash point93 °C @ 1013 hPa

Method ISO 2719

Autoignition temperature 395 °C @ 989 hPa

Method DIN 51794

Decomposition temperaturepH

No data available
3,0 (1 g/l in water @ 25 °C (77 °F))

Kinematic Viscosity 3,085 mm²/s @ 20 °C

Method ASTM D445

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Solubility 12,2 g/l @ 20 °C, in water, OECD 105 Partition coefficient 2,4 @ 25 °C (77 °F) OECD 117

n-octanol/water (log value)

Vapour pressure

. Values [hPa] Values [kPa] Values [atm] @ °C @ °F Method

2 0,2 0,002 20 68 135 13,5 0,135 120 248

Density and/or relative density

Values @ °C @ °F Method 0,923 20 68 DIN 51757

Relative vapour density 4,0 (Air = 1) @ 20 °C (68 °F)

Particle characteristics not applicable

9.2. Other information

Explosive propertiesDoes 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

Molecular weight 116,16 Molecular formula C6 H12 O2

Dissociation constant pKa 4,9 @ 24,1 °C (75,4 °F) OECD 112

Refractive index 1,413 @ 20 °C

Surface tension 56,6 mN/m (1 g/l @ 20°C (68°F)), OECD 115

Evaporation rate No data available

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, oxidizing agents.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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

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

Acute toxicity					
2-Methylvaleric acid (97-61-0)					
Routes of Exposure	Endpoint	Values	Species	Method	
Oral	LD50	2040 mg/kg	rat, male	OECD 401	
Dermal	LD50	2500 mg/kg	rabbit		
Inhalative	LC0	9 mg/l (8 h)	rat	OECD 403	

2-Methylvaleric acid, CAS: 97-61-0

Assessment

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

Acute oral toxicity
Acute dermal toxicity
Acute inhalation toxicity

STOT SE

Irritation and corrosion						
2-Methylvaleric acid (97-61-0)						
Target Organ Effects	Species	Result	Method			
Skin	rabbit	corrosive	OECD 404	4h		
Eyes	rabbit	severe irritation		5 % Substance		

2-Methylvaleric acid, CAS: 97-61-0

Assessment

The available data lead to the classification given in section 2

For respiratory irritation, no data are available

Sensitization				
2-Methylvaleric acid (9)	7-61-0)			
Target Organ Effects	Species	Evaluation	Method	
Skin	Human experience	not sensitizing	Maximisation Test	2 %, in Petrolatum

2-Methylvaleric acid, CAS: 97-61-0

Assessment

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

Skin sensitization

For respiratory sensitization, no data are available

2-Methylvaleric acid, CAS: 97-61-0

Assessment

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

STOT RE

Carcinogenicity, Mutagenicity, Reproductive toxicity							
2-Methylvaleric acid (9	97-61-0)						
Туре	Dose	Species	Evaluation	Method			
Developmental Toxicity	NOAEL: 250 mg/kg/d (6-15 d)	rat		Oral	Teratogenicity		
Developmental Toxicity	LOAEL: 187,5 mg/kg/d (6-15 d)	rat		Oral	Maternal toxicity		
Mutagenicity		Salmonella	negative	OECD 471			

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typhimurium Escherichia coli	(Ames)	

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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

2-Methylvaleric acid, CAS: 97-61-0

Main symptoms

cough, shortness of breath, nausea.

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

11.2. Information on other hazards

Endocrine disrupting properties

The substance has not been identified as having endocrine disrupting properties in accordance with section 2.3.

2-Methylvaleric acid, CAS: 97-61-0

Other adverse effects

Components of the product may be absorbed into the body through the skin.

Note

Handle in accordance with good industrial hygiene and safety practice. Further details on substance data can be found in the registration dossier under the following link:

http://echa.europa.eu/information-on-chemicals/registered-substances.

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

2-Methylvaleric acid, CAS: 97-61-0

Biodegradation

71,8 % (10 d), Sewage, domestic, non-adapted, aerobic, OECD 301 D.

Abiotic Degradation			
2-Methylvaleric acid (97-61-0)			
Туре	Result	Method	
Hydrolysis	No data available		
Photolysis	No data available		

12.3. Bioaccumulative potential

2-Methylvaleric acid (9)	7-61-0)	

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Туре	Result	Method
log Pow	2,4 @ 25 °C (77 °F)	measured, OECD 117
BCF	No data available	

12.4. Mobility in soil

2-Methylvaleric acid (97-61-0)		
Туре	Result	Method
Surface tension	56,6 mN/m (1 g/l @ 20°C (68°F))	OECD 115
Adsorption/Desorption	no data available	
Distribution to environmental	no data available	
compartments		

12.5. Results of PBT and vPvB assessment

2-Methylvaleric acid, CAS: 97-61-0

PBT and vPvB assessment

Not required

12.6. Endocrine disrupting properties

The substance has not been identified as having endocrine disrupting properties in accordance with section 2.3.

12.7. Other adverse effects

2-Methylvaleric acid, CAS: 97-61-0

No data available

Note

Avoid release to the environment.

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.

UN 3265

SECTION 14: Transport information

ADR/RID

14.1. UN number or ID number

Corrosive liquid, acidic, organic, n.o.s.

14.2. UN proper shipping name

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		(2-Methylpentanoic acid)
 	 	•

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

14.6. Special precautions for user

ADR Tunnel restriction code (E)
Classification Code C3
Hazard Number 80

ADN: Container and Tanker

14.1. UN number or ID number UN 3265

14.2. UN proper shipping nameCorrosive liquid, acidic, organic, n.o.s.

(2-Methylpentanoic acid)

14.3. Transport hazard class(es) 8
14.4. Packing group III
14.5. Environmental hazards

14.6. Special precautions for user

Classification Code C3 Hazard Number 80

ICAO-TI / IATA-DGR

14.1. UN number or ID number UN 3265

14.2. UN proper shipping nameCorrosive liquid, acidic, organic, n.o.s.

(2-Methylpentanoic acid)

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

14.6. Special precautions for user no data available

IMDG

14.1. UN number or ID number UN 3265

14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s.

(2-Methylpentanoic acid)

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

14.6. Special precautions for user

EmS F-A, S-B **14.7. Maritime transport in bulk according** not applicable

to IMO instruments

SECTION 15: Regulatory information

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

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Regulation 1272/2008, Annex VI

not listed

DI 2012/18/EU (Seveso III)

Category not subject

DI 1999/13/EC (VOC Guideline)

Component	Status
2-Methylvaleric acid	regulated
CAS: 97-61-0	

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758

Component	Status
2-Methylvaleric acid	The substance will not be pre-registered
CAS: 97-61-0	

For details and further information please refer to the original regulation.

International Inventories

2-Methylvaleric acid, CAS: 97-61-0

AICS (AU)

DSL (CA)

IECSC (CN)

EC-No. 2025949 (EU)

ENCS (2)-608 (JP)

ISHL (2)-608 (JP)

KECI KE-24709 (KR)

INSQ (MX)

PICCS (PH)

TSCA (US)

NZIoC (NZ)

TCSI (TW)

National regulatory information Great Britain

Releases to air (Pollution Inventory Substances)

not subject

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

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

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

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.og.com).

The annex is not required because the substance is registered as an intermediate under REACh

Disclaimer

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. OQ Chemicals makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

End of Safety Data Sheet

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