

SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006
Version 3.0 Revision Date 12.07.2007
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : **3-Methyl-1-butanol**

Product Number : M32658
Brand : Sigma-Aldrich

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2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Flammable. Harmful by inhalation. Irritating to respiratory system. Repeated exposure may cause skin dryness or cracking.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Isoamyl alcohol
Isopentyl alcohol

Formula : C₅H₁₂O
Molecular Weight : 88.15 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration [%]
3-Methylbutan-1-ol				
123-51-3	204-633-5	603-006-00-7	Xn, R10- R20- R37- R66	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
3-Methylbutan-1-ol	123-51-3	STEL	125 ppm 458 mg/m ³	1997-01-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits
		TWA	100 ppm 366 mg/m ³	1997-01-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid, clear
Colour	colourless

Safety data

pH	5.6 at 25 g/l at 20 °C
Melting point	-117 °C
Boiling point	131 - 132 °C
Flash point	43 °C - closed cup
Ignition temperature	340 °C
Lower explosion limit	1.2 %(V)
Upper explosion limit	9 %(V)
Vapour pressure	3 hPa at 20 °C 23.6 hPa at 50 °C
Density	0.809 g/cm ³
Water solubility	soluble
Partition coefficient: n-octanol/water	log Pow: 1.28
Vapour density	3.04 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents, Acid chlorides, Acid anhydrides, Reducing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.

Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - > 5,000 mg/kg

LD50 Dermal - rabbit - > 3,000 mg/kg

Irritation and corrosion

Skin - rabbit - Skin irritation

Eyes - rabbit - Eye irritation

Sensitisation

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Chronic exposure

no data available

Signs and Symptoms of Exposure

prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	Harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.
Target Organs	Central nervous system,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability

Ecotoxicity effects

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 260 mg/l - 48 h

Toxicity to algae EC50 - Scenedesmus subspicatus - 490 mg/l - 72 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**ADR/RID**

UN-Number: 1105 Class: 3

Packing group: III

Proper shipping name: PENTANOLS

IMDG

UN-Number: 1105 Class: 3

Packing group: III

EMS-No: F-E, S-D

Proper shipping name: PENTANOLS

Marine pollutant: No

IATA

UN-Number: 1105 Class: 3

Packing group: III

Proper shipping name: Pentanols

15. REGULATORY INFORMATION**Labelling according to EC Directives**

EC Label

Hazard symbols

Xn Harmful

R-phrase(s)

R10 Flammable.

R20 Harmful by inhalation.

R37 Irritating to respiratory system.

R66 Repeated exposure may cause skin dryness or cracking.

S-phrase(s)

S46 If swallowed, seek medical advice immediately and show this container or label.

16. OTHER INFORMATION**Further information**

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