### **ChemicalBook**

# Chemical Safety Data Sheet MSDS / SDS

# 2-METHYL-1-BUTANOL

Revision Date: 2023-05-06 Revision Number: 1

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

#### **Product identifier**

Product name : 2-METHYL-1-BUTANOL

CBnumber : CB8697006
CAS : 34713-94-5
EINECS Number : 205-289-9

Synonyms : 2-methyl butanol,2-Methylbutyl alcohol

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

### **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 010-86108875

# SECTION 2: Hazards identification

### Classification of the substance or mixture

Flammable liquids, Category 3

Skin irritation, Category 2

Serious eye damage, Category 1

### Label elements

### Pictogram(s)

Signal word Danger

### Hazard statement(s)

H226 Flammable liquid and vapour

H315 Causes skin irritation

H318 Causes serious eye damage

### Precautionary statement(s)

### Prevention

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

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P264 Wash ... thoroughly after handling.

#### Response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

P370+P378 In case of fire: Use ... to extinguish.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P321 Specific treatment (see ... on this label).

P332+P317 If skin irritation occurs: Get medical help.

P362+P364 Take off contaminated clothing and wash it before reuse.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

#### Storage

P403+P235 Store in a well-ventilated place. Keep cool.

#### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

# Other hazards

no data available

# SECTION 3: Composition/information on ingredients

### **Substance**

Product name : 2-METHYL-1-BUTANOL

Synonyms : 2-methyl butanol,2-Methylbutyl alcohol

CAS : 34713-94-5
EC number : 205-289-9
MF : C5H12O
MW : 88.15

# SECTION 4: First aid measures

### Description of first aid measures

### If inhaled

Fresh air, rest.

#### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

### Following ingestion

Rinse mouth. Do NOT induce vomiting. Rest. Refer for medical attention .

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

no data available

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

no data available

# **SECTION 5: Firefighting measures**

### **Extinguishing media**

Use alcohol-resistant foam, powder, carbon dioxide.

#### Specific Hazards Arising from the Chemical

no data available

### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

# SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

Collect leaking and spilled liquid in sealable metal or glass containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

# Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# SECTION 7: Handling and storage

# Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Fireproof. Cool.

# SECTION 8: Exposure controls/personal protection

### **Control parameters**

#### Occupational Exposure limit values

no data available

### **Biological limit values**

no data available

### **Exposure controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the riskelimination area.

### Individual protection measures

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

# Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

# Thermal hazards

no data available

# SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Liquid
Colour	COLORLESS LIQ
Odour	no data available
Melting point/freezing point	-70°C
Boiling point or initial boiling point and	
boiling range	
Flammability	Flammable.
Lower and upper explosion	no data available
limit/flammability limit	

Flash point	110 °F(lit.)
Auto-ignition temperature	725 DEG F (385 DEG C).
Decomposition temperature	no data available
рН	no data available
Kinematic viscosity	no data available
Solubility	MISCIBLE WITH ALC & ETHER
Partition coefficient n-octanol/water	log Kow= 1.29 (measured)
Vapour pressure	3 mm Hg ( 20 °C)
Density and/or relative density	0.815 g/mL at 25°C(lit.)
Relative vapour density	3.0 (Air=1)
Particle characteristics	no data available

# SECTION 10: Stability and reactivity

# Reactivity

no data available

# **Chemical stability**

no data available

# Possibility of hazardous reactions

no data available

### **Conditions to avoid**

no data available

# Incompatible materials

no data available

# Hazardous decomposition products

no data available

# SECTION 11: Toxicological information

# **Acute toxicity**

• Oral: LD50 Rat oral 4.92 ml/kg

• Inhalation: no data available

• Dermal: no data available

### Skin corrosion/irritation

no data available

# Serious eye damage/irritation

no data available

# Respiratory or skin sensitization

no data available

# Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

# Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### **Aspiration hazard**

no data available

# SECTION 12: Ecological information

# **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### Persistence and degradability

Data specific to the rate of environmental biodegradation of 2-methyl-1-butanol were not located. However, many biodegradation studies have demonstrated that the lower molecular weight aliphatic alcohols that are similar in structure to 2-methyl-1-butanol (such as 2-methyl-1-propanol) are readily biodegradable(1-11). This analogy indicates that 2-methyl-1-butanol is also likely to be readily biodegradable in the environment(SRC).

# **Bioaccumulative potential**

Based upon a water solubility of 30,000 mg/l at 25 deg C(1), the BCF for 2-methyl-1-butanol can be estimated to be 1.8 from a regression-derived equation(2,SRC). Based upon a measured log Kow of 1.29(3), the BCF for 2-methyl-1-butanol can be estimated to be 5.6 from a regression-derived equation(2,SRC). These BCF values suggest that 2-methyl-1-butanol will not bioconcentrate significantly in aquatic organisms(SRC).

# Mobility in soil

Based upon a water solubility of 30,000 mg/l at 25 deg C(1), the Koc for 2-methyl-1-butanol can be estimated to be 15 from a regression-derived equation(2,SRC). Based upon a measured log Kow of 1.29(3), the Koc for 2-methyl-1-butanol can be estimated to be 120 from a regression-derived equation(2,SRC). These BCF values suggest that 2-methyl-1-butanol has high to very high soil mobility(4).

#### Other adverse effects

no data available

# **SECTION 13: Disposal considerations**

### Disposal methods

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

# **SECTION 14: Transport information**

#### **UN Number**

ADR/RID: UN1105 (For reference only, please check.)

IMDG: UN1105 (For reference only, please check.)

IATA: UN1105 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: PENTANOLS (For reference only, please check.)

IMDG: PENTANOLS (For reference only, please check.)

IATA: PENTANOLS (For reference only, please check.)

# Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

# Packing group, if applicable

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

# **Environmental hazards**

ADR/RID: No

IMDG: No

### Special precautions for user

no data available

# Transport in bulk according to IMO instruments

no data available

# SECTION 15: Regulatory information

### Safety, health and environmental regulations specific for the product in question

**European Inventory of Existing Commercial Chemical Substances (EINECS)** 

Listed.

**EC Inventory** 

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Not Listed.

China Catalog of Hazardous chemicals 2015

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Not Listed.

**PICCS** 

Not Listed.

**Vietnam National Chemical Inventory** 

Not Listed.

**IECSC** 

Not Listed.

Korea Existing Chemicals List (KECL)

Not Listed.

# **SECTION 16: Other information**

# Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average STEL: Short term exposure limit LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?

pageID=0&request\_locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/

#### Disclaimer:

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