



## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION:

<b>PRODUCT CODE</b>	A0250
<b>PRODUCT NAME</b>	2-METHYL BUTANOL
<b>SUPPLIER</b>	Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com

**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

### 2. HAZARD IDENTIFICATION:

#### Emergency Overview

#### OSHA Hazards

Combustible Liquid, Irritant

#### GHS Classification

Flammable liquids (Category 3)  
Acute toxicity, Oral (Category 5)  
Acute toxicity, Inhalation (Category 4)  
Acute toxicity, Dermal (Category 5)  
Skin irritation (Category 2)  
Serious eye damage (Category 1)

#### GHS Label elements, including precautionary statements

Pictogram

Signal word            Danger

Hazard statement(s)

H226	Flammable liquid and vapor
H303 H313	May be harmful if swallowed or in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H332	Harmful if inhaled

Precautionary statement(s)

P280	Wear protective gloves/ eye protection/ face protection
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P305 P351 P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Other hazards**

Repeated exposure may cause skin dryness or cracking.

**HMIS Classification**

<b>Health hazard</b>	2
<b>Flammability</b>	3
<b>Physical hazards</b>	1

**NFPA Rating**

<b>Health hazard</b>	2
<b>Fire</b>	3
<b>Reactivity Hazard</b>	0

**Potential Health Effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation
<b>Eyes</b>	Causes eye irritation
<b>Ingestion</b>	May be harmful if swallowed

**3. COMPOSITION AND INFORMATION ON INGREDIENTS:**

Synonyms	2-Methylbutan-1-ol	
Formula	C5 H12 O	
Molecular Weight	88.15 g/mol	
CAS-No	EC-No	Index-No
137-32-6	205-289-9	603-006-00-7

**4. FIRST-AID GUIDE:**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

**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 GUIDE:****Conditions of flammability**

Flammable in the presence of a source of ignition when the temperature is above the flash point, keep away from heat/sparks/open flame/hot surface. No smoking

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for firefighting if necessary

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Further information**

Use water spray to cool unopened containers

**6. ACCIDENTAL RELEASE GUIDE:****Personal precautions**

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

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

**Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13)

**7. HANDLING AND STORAGE:****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage

## 8. EXPOSURE AND PERSONAL PROTECTION:

Contains no substances with occupational exposure limit values

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

#### Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

#### Skin and body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, and the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

#### 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

Color

COLORLESS TO PALE YELLOW

### Safety data

pH

no data available

Melting point (°C)

no data available

Boiling point (°C)

128

Flash point (°F)

Closed cup 110

Ignition temperature

no data available

Auto ignition temperature

340 C (644 F)

Lower explosion limit	1.2 % (V)
Upper explosion limit	10.3 % (V)
Vapor pressure (mm Hg @20 °C)	0.26
Density @25 °C	no data available
Water solubility	SLIGHT
Partition coefficient:	
n-octanol/ water	no data available
Relative vapor density	3.04
Odor	CHARACTERISTIC
Odor Threshold	no data available
Evaporation rate	no data available

## 10. STABILITY AND REACTIVITY:

### Chemical stability

Stable under recommended storage conditions

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

## 11. TOXICOLOGICAL INFORMATION:

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - 4,170 mg/kg

#### Inhalation LC50

No data available

#### Dermal LD50

LD50 Dermal - rabbit - 2,900 mg/kg

### Other information on acute toxicity

No data available

**Skin corrosion/irritation**

Skin - rabbit - Skin irritation

**Serious eye damage/eye irritation**

Eyes - rabbit - Severe eye irritation

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity****IARC**

No components of this product present at levels greater than or equal to 0.1% is identified as probable. Possible or confirmed human carcinogen by IARC

**ACGIH**

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

**NTP**

No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

**OSHA**

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

**Reproductive toxicity**

No data available

**Teratogenicity**

No data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

No data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available

**Aspiration hazard**

No data available

**Potential health effects**

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation
Ingestion	May be harmful if swallowed
Skin	May be harmful if absorbed through skin. Causes skin irritation
Eyes	Causes eye irritation

**Synergistic effects**

No data available

**Additional Information**

RTECS: Not available

**12. ECOLOGICAL INFORMATION:**

**Toxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

No data available

**13. DISPOSAL RECOMMENDATIONS:**

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material

**Contaminated packaging**

Dispose of as unused product

**14. TRANSPORTATION INFORMATION:**

**DOT (US)**

UN number: 1105 Class: 3 Packing group: III

Proper shipping name: PENTANOLS

**IMDG**

UN number: 1105 Class: 3 Packing group: III  
Proper shipping name: PENTANOLS

**IATA**

UN number: 1105 Class: 3 Packing group: III  
Proper shipping name: PENTANOLS

**15. REGULATORY INFORMATION:**

**OSHA Hazards**

Combustible Liquid, Irritant

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard

**Massachusetts Right to Know Components**

2-Methylbutan-1-ol	CAS-No	Revision Date
	137-32-6	1993-04-24

**Pennsylvania Right to Know Components**

2-Methylbutan-1-ol	CAS-No	Revision Date
	137-32-6	1993-04-24

**New Jersey Right to Know Components**

2-Methylbutan-1-ol	CAS-No	Revision Date
	137-32-6	1993-04-24

**California Prop 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

**16. OTHER INFORMATION:**



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