

1 - Product and Company Information

ProductName	2-METHYL-2-BUTENE, 2.0M SOLUTION IN TETRAHYDROFURAN
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2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Highly flammable. May form explosive peroxides. Harmful if swallowed. Irritating to eyes, respiratory system and skin.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I
2-METHYL-2-BUTENE, 2.0M SOLUTION INTETRAHYDROFURA	None	None	None
Formula	C5H10		
Molecular Weight	70.14 AMU		

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: 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 RISKS

Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions. Explosion Hazards: Vapor may travel considerable distance to source of ignition and flash back.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat, sparks, and open flame. Store at 2-8°C

SPECIAL REQUIREMENTS: May develop pressure. Open carefully.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Special Protective Measures: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

9 - Physical and Chemical Properties

pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	- 46.0 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	Lower: 1.6 % Upper: 8.7 %	
Vapor Pressure	204.732 mmHg	20 °C
SG/Density	0.835 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	2.4 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

11 - Toxicological Information

SIGNS AND SYMPTOMS OF EXPOSURE

Coughing, chest pains, difficulty in breathing. Nausea, dizziness, and headache. Unconsciousness. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Exposure can cause: CNS depression. Chemical pneumonitis. Narcotic effect.

ROUTE OF EXPOSURE

Skin Contact: Prolonged or repeated exposure to skin causes defatting and dermatitis. Causes skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Inhalation: May be harmful if inhaled.
Ingestion: Harmful if swallowed.
Multiple Routes: Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract.

TARGET ORGAN INFORMATION

Kidneys. Liver. Central nervous system.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1993
Class: 3
PG: II
Proper Shipping Name: Flammable liquid, n.o.s.

IMDG

UN#: 1993
Class: 3
PG: II
Proper Shipping Name: Flammable liquid, n.o.s.

Marine Pollutant: No
Severe Marine Pollutant: No

Technical Name: Required

IATA

UN#: 1993
Class: 3
PG: II
Proper Shipping Name: Flammable liquid, n.o.s.

Inhalation Packing Group I: No

Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: F-Xn

Highly Flammable. Harmful.

R-PHRASES: 11-19-22-36/37/38

Highly flammable. May form explosive peroxides. Harmful if swallowed. Irritating to eyes, respiratory system and skin.

S-PHRASES: 16-26-36/37/39

Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

Caution: Substance not yet fully tested (EU).

16 - Other Information

For R&D use only. Not for drug, household or other uses.

WARRANTY:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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