

# 2-METHYL-1-PENTENE

MPE

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> iso-Hexene 2-Methyl pentene-1 4-Methyl-4-pentene 1-Methyl-1-propylethylene		Liquid Colorless Floats on water. Flammable, irritating vapor is produced.
Keep people away. Shut off ignition sources and call fire department. Avoid contact with liquid and vapor. Stay upwind and use water spray to "knock down" vapor. Notify local health and pollution control agencies.		
<b>Fire</b>	FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Extinguish with dry chemical, foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.	
<b>Exposure</b>	CALL FOR MEDICAL AID. VAPOR If inhaled, will cause dizziness difficult breathing, or loss of consciousness. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Irritating to skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED, and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.	
<b>Water Pollution</b>	Dangerous to aquatic life in high concentrations. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.	

<b>1. CORRECTIVE RESPONSE ACTIONS</b> Stop discharge Contain Collection Systems: Skim	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 CG Compatibility Group: Not listed. 2.2 Formula: CH <sub>2</sub> C(CH <sub>3</sub> )CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub> 2.3 IMO/UN Designation: 3.1/2288 2.4 DOT ID No.: 2288 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: 128 2.7 Standard Industrial Trade Classification: 51119
<b>3. HEALTH HAZARDS</b> 3.1 <b>Personal Protective Equipment:</b> Rubber or neoprene gloves, splash goggles and NIOSH approved self-contained breathing apparatus. 3.2 <b>Symptoms Following Exposure:</b> INHALATION: May produce anesthetic effects. EYES: Moderate eye irritation possible. 3.3 <b>Treatment of Exposure:</b> Call a doctor. INHALATION: Remove from contaminated atmosphere. If respiration is labored, administer oxygen. If unconscious, administer artificial respiration. EYES: Flush with clear tap water for 15 min. SKIN: Wash with soap and water. INGESTION: Do not induce vomiting. Physician may remove by cuffed tube lavage. 3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Currently not available 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Currently not available 3.11 Liquid or Solid Characteristics: Currently not available 3.12 Odor Threshold: Currently not available 3.13 IDLH Value: Not listed. 3.14 OSHA PEL-TWA: Not listed. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed	

## 4. FIRE HAZARDS

- 4.1 Flash Point: -15°F (est.).
- 4.2 Flammable Limits in Air: 1.2%
- 4.3 Fire Extinguishing Agents: Foam, carbon dioxide, dry chemical.
- 4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.
- 4.5 Special Hazards of Combustion Products: Currently not available
- 4.6 Behavior in Fire: Can react vigorously with oxidizing materials.
- 4.7 Auto Ignition Temperature: 572°F.
- 4.8 Electrical Hazards: Currently not available
- 4.9 Burning Rate: Currently not available
- 4.10 Adiabatic Flame Temperature: Currently not available
- 4.11 Stoichiometric Air to Fuel Ratio: 42.8 (calc.)
- 4.12 Flame Temperature: Currently not available
- 4.13 Combustion Molar Ratio (Reactant to Product): 12.0 (calc.)
- 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

## 5. CHEMICAL REACTIVITY

- 5.1 Reactivity with Water: No reaction
- 5.2 Reactivity with Common Materials: No reaction
- 5.3 Stability During Transport: Stable
- 5.4 Neutralizing Agents for Acids and Caustics: Currently not available
- 5.5 Polymerization: Will not occur.
- 5.6 Inhibitor of Polymerization: Not pertinent

## 6. WATER POLLUTION

- 6.1 Aquatic Toxicity: 100-1000 ppm/96 hr/finfish/TL<sub>m</sub>.
- 6.2 Waterfowl Toxicity: Currently not available
- 6.3 Biological Oxygen Demand (BOD): Theoretical Oxygen Demand-1.0% after 6 hrs., 1.1% after 12 hrs., 1.7% after 24 hrs.
- 6.4 Food Chain Concentration Potential: Currently not available
- 6.5 GESAMP Hazard Profile:  
 Bioaccumulation: 0  
 Damage to living resources: 2  
 Human Oral hazard: (1)  
 Human Contact hazard: 0  
 Reduction of amenities: 0

## 7. SHIPPING INFORMATION

- 7.1 Grades of Purity: 99.9% with .1% isoolefins (Research), 99.8% with .1% isoolefins and .1% trans-4-Methylpentene-2 (pure), 95.8% (Tech), 95.0% Minimum.
- 7.2 Storage Temperature: Currently not available
- 7.3 Inert Atmosphere: Currently not available
- 7.4 Venting: Currently not available
- 7.5 IMO Pollution Category: C
- 7.6 Ship Type: 2
- 7.7 Barge Hull Type: Currently not available

## 8. HAZARD CLASSIFICATIONS

- 8.1 49 CFR Category: Flammable liquid
- 8.2 49 CFR Class: 3
- 8.3 49 CFR Package Group: II
- 8.4 Marine Pollutant: No
- 8.5 NFPA Hazard Classification:  

Category	Classification
Health Hazard (Blue).....	1
Flammability (Red).....	3
Instability (Yellow).....	0
- 8.6 EPA Reportable Quantity: Not listed.
- 8.7 EPA Pollution Category: Not listed.
- 8.8 RCRA Waste Number: Not listed
- 8.9 EPA FWPCA List: Not listed

## 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 Physical State at 15° C and 1 atm: Liquid
- 9.2 Molecular Weight: 84.156.
- 9.3 Boiling Point at 1 atm: 143.8°F, 62°C, 355.2°K.
- 9.4 Freezing Point: -212.3°F, -135.8°C, 137.4°K.
- 9.5 Critical Temperature: Currently not available
- 9.6 Critical Pressure: Currently not available
- 9.7 Specific Gravity: 0.685 at 15°C.
- 9.8 Liquid Surface Tension: Currently not available
- 9.9 Liquid Water Interfacial Tension: Currently not available
- 9.10 Vapor (Gas) Specific Gravity: 2.9.
- 9.11 Ratio of Specific Heats of Vapor (Gas): 1.067.
- 9.12 Latent Heat of Vaporization: 144.1 Btu/lb = 79.96 cal/g = 3.35 X 10<sup>8</sup> J/kg.
- 9.13 Heat of Combustion: Currently not available
- 9.14 Heat of Decomposition: Currently not available
- 9.15 Heat of Solution: Currently not available
- 9.16 Heat of Polymerization: Not pertinent
- 9.17 Heat of Fusion: Currently not available
- 9.18 Limiting Value: Currently not available
- 9.19 Reid Vapor Pressure: Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
60	42.640		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I N S O L U B L E	100	6.300		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E