

# 4-METHYL-1-PENTENE

MTN

## CAUTIONARY RESPONSE INFORMATION

|   |   |           |
|---|---|-----------|
| <b>Common Synonyms</b>  | Liquid  | Colorless |
| <p><b>Keep people away. Avoid contact with liquid and vapor.</b><br/> <b>Avoid inhalation.</b><br/>                 Evacuate area.<br/>                 Shut off ignition sources. Call fire department.<br/>                 Wear self-contained breathing apparatus and protective clothing.<br/>                 Stay upwind and use water spray to "knock down" vapor.<br/>                 Notify local health and pollution control agencies.<br/>                 Protect water intakes.</p> |   |           |
| <b>Fire</b>   | <p><b>FLAMMABLE.</b><br/>                 Flashback along vapor trail may occur.<br/>                 Vapor may explode if ignited in an enclosed area.<br/>                 Water may be ineffective on fire.<br/>                 Extinguish with dry chemical, alcohol foam, or CO<sub>2</sub>.<br/>                 Cool exposed containers with water.</p>   |           |
| <b>Exposure</b>   | <p>CALL FOR MEDICAL AID.</p> <p><b>VAPOR</b><br/>                 If inhaled, will cause dizziness, difficult breathing, or loss of consciousness.<br/>                 Move to fresh air.<br/>                 If breathing has stopped, give artificial respiration.<br/>                 If breathing is difficult, give oxygen.</p> <p><b>LIQUID</b><br/>                 Irritating to skin and eyes.<br/>                 Harmful if swallowed.<br/>                 Remove contaminated clothing and shoes.<br/>                 Flush affected areas with plenty of water.<br/>                 IF IN EYES, hold eyelids open and flush with plenty of water.</p> |           |
| <b>Water Pollution</b>  | <p>Effect of low concentrations on aquatic life is unknown.<br/>                 Fouling to shoreline.<br/>                 May be dangerous if it enters water intakes.<br/>                 Notify local health and wildlife officials.<br/>                 Notify operators of nearby water intakes.</p>  |           |

### 1. CORRECTIVE RESPONSE ACTIONS

Stop discharge  
 Contain  
 Collection Systems: Skim

### 2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: 30; Olefins
- 2.2 Formula: (CH<sub>2</sub>)<sub>2</sub>CHCH<sub>2</sub>CH=CH<sub>2</sub>
- 2.3 IMO/UN Designation: Currently not available
- 2.4 DOT ID No.: Not listed
- 2.5 CAS Registry No.: 691-37-2
- 2.6 NAERG Guide No.: Not listed
- 2.7 Standard Industrial Trade Classification: 51119

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Wear self-contained breathing apparatus, rubber boots, heavy rubber gloves and eye protection.
- 3.2 **Symptoms Following Exposure:** Harmful if inhaled or swallowed. Vapor or mist is irritating to the eyes, mucous membrane and upper respiratory tract. Causes skin irritation. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.
- 3.3 **Treatment of Exposure:** INHALATION: Call for medical aid. Remove the victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. EYES: Separate the eyelids with the fingers and flush with plenty of water. SKIN: Immediately wash with soap and copious amounts of water.
- 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:** Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.
- 3.11 **Liquid or Solid Characteristics:** Causes smarting of skin and first degree burn on short exposure. May cause second degree burn on long exposure.
- 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:**  
-25°F C.C.
- 4.2 **Flammable Limits in Air:** LEL 1.2%-upper explosive limit data not available.
- 4.3 **Fire Extinguishing Agents:** Carbon dioxide, dry chemical, alcohol foam.
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective.
- 4.5 **Special Hazards of Combustion Products:** Vapors may travel considerable distance to source of ignition and flashback. Container explosion may occur under fire conditions. Forms explosive mixtures in air.
- 4.6 **Behavior in Fire:** Currently not available
- 4.7 **Auto Ignition Temperature:** Currently not available
- 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:** Not pertinent.
- 5.5 **Polymerization:** Not pertinent.
- 5.6 **Inhibitor of Polymerization:** Not pertinent.

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**  
Currently not available
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):**  
Currently not available
- 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: -

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 97%
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** Data not available.
- 7.4 **Venting:** Data not available.
- 7.5 **IMO Pollution Category:** C
- 7.6 **Ship Type:** 3
- 7.7 **Barge Hull Type:** Currently not available

### 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed.
- 8.2 **49 CFR Class:** Not pertinent.
- 8.3 **49 CFR Package Group:** Not listed.
- 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:** 84.16
- 9.3 **Boiling Point at 1 atm:** 127.4-129.2°F = 53-54°C = 326.2-327.2°K
- 9.4 **Freezing Point:** Currently not available
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 0.665
- 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):**  
Currently not available
- 9.12 **Latent Heat of Vaporization:** Currently not available
- 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:** Currently not available
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** 8.49 psia

### NOTES

# 4-METHYL-1-PENTENE

MTN

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

| 9.24<br>SOLUBILITY IN WATER |   | 9.25<br>SATURATED VAPOR PRESSURE |                        | 9.26<br>SATURATED VAPOR DENSITY |   | 9.27<br>IDEAL GAS HEAT CAPACITY  |   |
|-----------------------------|---|----------------------------------|------------------------|---------------------------------|---|--|---|
| Temperature<br>(degrees F)  | Pounds per 100 pounds<br>of water         | Temperature<br>(degrees F)       | Pounds per square inch | Temperature<br>(degrees F)      | Pounds per cubic foot   | Temperature<br>(degrees F)   | British thermal unit per<br>pound-F   |
|                             | I<br>N<br>S<br>O<br>L<br>U<br>B<br>L<br>E | 68<br>100                        | 8.509<br>8.490         |                                 | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E | 0<br>25<br>50<br>75<br>100<br>125<br>150<br>175<br>200<br>225<br>250<br>275<br>300<br>325<br>350<br>375<br>400<br>425<br>450<br>475<br>500<br>525<br>550<br>575<br>600 | 0.328<br>0.344<br>0.360<br>0.375<br>0.390<br>0.405<br>0.000<br>0.434<br>0.448<br>0.461<br>0.475<br>0.488<br>0.501<br>0.514<br>0.526<br>0.538<br>0.550<br>0.562<br>0.573<br>0.585<br>0.596<br>0.607<br>0.617<br>0.627<br>0.638 |