



# Material Safety Data Sheet

<b>NFPA</b>	<b>HMIS</b>	<b>Personal Protective Equipment</b>						
	<table border="1"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #FFCCCC;">Fire Hazard</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	4	Reactivity	0	
Health Hazard	2							
Fire Hazard	4							
Reactivity	0							
		See Section 15.						

<b>Section 1. Chemical Product and Company Identification</b>		<i>Page Number: 1</i>
<b>Common Name/Trade Name</b>	<b>2-Methyl-2-butene</b>	
<b>Manufacturer</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
<b>Commercial Name(s)</b>	Not available.	
<b>Synonym</b>	Amylene; 1,1,2-Trimethylethylene; Trimethylethylene; 2-Butene-2-methyl-	
<b>Chemical Name</b>	Not available.	
<b>Chemical Family</b>	Not available.	
<b>Chemical Formula</b>	C5-H10	
<b>Supplier</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	<b>Catalog Number(s)</b>	M2057, YY723
	<b>CAS#</b>	513-35-9
	<b>RTECS</b>	EM7650000
	<b>TSCA</b>	TSCA 8(b) inventory: 2-Methyl-2-butene
	<b>CI#</b>	Not available.
<b>IN CASE OF EMERGENCY</b> <b>CHEMTREC (24hr) 800-424-9300</b>  CALL (310) 516-8000		

<b>Section 2. Composition and Information on Ingredients</b>					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) {2-}Methyl-2-butene	513-35-9				100
<b>Toxicological Data on Ingredients</b>		<b>2-Methyl-2-butene</b> LD50: Not available. LC50: Not available.			

<b>Section 3. Hazards Identification</b>	
<b>Potential Acute Health Effects</b>	Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, .
<b>Potential Chronic Health Effects</b>	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. The substance may be toxic to kidneys. Repeated or prolonged exposure to the substance can produce target organs damage.

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
<b>Serious Skin Contact</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Serious Inhalation</b>	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
<b>Ingestion</b>	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Serious Ingestion</b>	Not available.

**Section 5. Fire and Explosion Data**

<b>Flammability of the Product</b>	Flammable.
<b>Auto-Ignition Temperature</b>	240°C (464°F)
<b>Flash Points</b>	CLOSED CUP: <-6.6667°C (20°F); -45 C (-49 F)
<b>Flammable Limits</b>	LOWER: 0.6% UPPER: 7.7%
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO2).
<b>Fire Hazards in Presence of Various Substances</b>	Extremely flammable in presence of open flames and sparks, of heat.
<b>Explosion Hazards in Presence of Various Substances</b>	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
<b>Fire Fighting Media and Instructions</b>	Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
<b>Special Remarks on Fire Hazards</b>	Vapor may travel considerable distance to source of ignition and flash back. Vapor may form explosive mixtures with air.
<b>Special Remarks on Explosion Hazards</b>	Vapor may form explosive mixtures with air.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
<b>Large Spill</b>	Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

**Section 7. Handling and Storage**

<b>Precautions</b>	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.
<b>Storage</b>	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 5°C (41°F). Refrigerate.

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
<b>Personal Protection</b>	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
<b>Personal Protection in Case of a Large Spill</b>	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
<b>Exposure Limits</b>	Not available.

**Section 9. Physical and Chemical Properties**

<b>Physical state and appearance</b>	Liquid.	<b>Odor</b>	Disagreeable.
<b>Molecular Weight</b>	70.14 g/mole	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not applicable.	<b>Color</b>	Not available.
<b>Boiling Point</b>	35°C (95°F) - 38 C.		
<b>Melting Point</b>	-133.61°C (-208.5°F)		
<b>Critical Temperature</b>	197.85°C (388.1°F)		
<b>Specific Gravity</b>	0.66 (Water = 1)		
<b>Vapor Pressure</b>	62.4 kPa (@ 20°C)		
<b>Vapor Density</b>	2.4 (Air = 1)		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Ionicity (in Water)</b>	Not available.		
<b>Dispersion Properties</b>	See solubility in water, diethyl ether.		
<b>Solubility</b>	Soluble in diethyl ether. Insoluble in cold water, hot water. Soluble in ethanol, benzene.		

**Section 10. Stability and Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	Heat, ignition sources (flames, sparks, static), incompatible materials
<b>Incompatibility with various substances</b>	Reactive with oxidizing agents, acids.
<b>Corrosivity</b>	Not available.
<b>Special Remarks on Reactivity</b>	Not available.
<b>Special Remarks on Corrosivity</b>	Not available.
<b>Polymerization</b>	Will not occur.

**Section 11. Toxicological Information**

<b>Routes of Entry</b>	Absorbed through skin. Eye contact. Inhalation. Ingestion.
<b>Toxicity to Animals</b>	LD50: Not available. LC50: Not available.
<b>Chronic Effects on Humans</b>	May cause damage to the following organs: kidneys.
<b>Other Toxic Effects on Humans</b>	Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, .
<b>Special Remarks on Toxicity to Animals</b>	Not available.
<b>Special Remarks on Chronic Effects on Humans</b>	Not available.
<b>Special Remarks on other Toxic Effects on Humans</b>	Acute Potential Health Effects: Skin: Causes skin irritation. I may be absorbed through the skin and cause systemic effects. Eyes: Causes eye irritation. Inhalation: Vapors can irritate the nose and throat causing coughing and wheezing. Inhalation of a high concentration of vapors can affect behavior/central nervous system and cause central nervous system effects such as dizziness, lightheadedness, nausea, loss of coordination, suffocation, and passing out. It can also affect the kidneys. Ingestion: May cause digestive tract irritation. It may also affect the kidneys, and behavior/central nervous system and cause symptoms similar to that of inhalation Chronic Pontial Health Effects: Inhalation and Ingestion: Prolonged or repeated inhalation and ingestion may affect kidneys.

**Section 12. Ecological Information**

<b>Ecotoxicity</b>	Not available.
<b>BOD5 and COD</b>	Not available.
<b>Products of Biodegradation</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
<b>Toxicity of the Products of Biodegradation</b>	The product itself and its products of degradation are not toxic.
<b>Special Remarks on the Products of Biodegradation</b>	Not available.

Continued on Next Page

**Section 13. Disposal Considerations**

**Waste Disposal** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transport Information**

**DOT Classification** CLASS 3: Flammable liquid.

**Identification** : 2-Methyl-2-Butene UNNA: 2460 PG: II

**Special Provisions for Transport** Not available.

**DOT (Pictograms)**



**Section 15. Other Regulatory Information and Pictograms**

**Federal and State Regulations** Pennsylvania RTK: 2-Methyl-2-butene  
 Massachusetts RTK: 2-Methyl-2-butene  
 Massachusetts spill list: 2-Methyl-2-butene  
 TSCA 8(b) inventory: 2-Methyl-2-butene

**California Proposition 65 Warnings** California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.  
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
 EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

<b>Other Classifications</b>	<b>WHMIS (Canada)</b>	CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).	
	<b>DSCL (EEC)</b>	R12- Extremely flammable. R36/37/38- Irritating to eyes, respiratory system and skin.	S9- Keep container in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33- Take precautionary measures against static discharges. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

**HMIS (U.S.A.)**

Health Hazard	2
Fire Hazard	4
Reactivity	0
Personal Protection	h

**National Fire Protection Association (U.S.A.)**

Health Flammability  
 Reactivity  
 Specific hazard

**WHMIS (Canada) (Pictograms)**



**DSCL (Europe)  
(Pictograms)**

**TDG (Canada)  
(Pictograms)**

**ADR (Europe)  
(Pictograms)**

**Protective Equipment**


Gloves.



Lab coat.



Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

**Section 16. Other Information**
**MSDS Code** M0272

**References** Not available.

**Other Special Considerations** Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/12/2006.

CALL (310) 516-8000

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.