



TCI EUROPE N.V.

# SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revision number: 1

Revision date: 10/03/2018

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name: 2-Methyl-2-butene  
Product code: P0067

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Reagents.

### 1.3 Details of the supplier of the safety data sheet

#### Supplier:

TCI EUROPE N.V.  
Boerenveldseweg 6  
Haven 1063  
B-2070 Zwijndrecht  
Telephone: +32(0)3 735 07 00  
E-mail: sales-eu@tcichemicals.com

1.4 Emergency telephone number: +32(0)70 245 245

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Flammable liquids	Category 2
Acute toxicity (Oral)	Category 4
Long-term aquatic hazard	Category 2

### 2.2 Label elements

#### Pictograms or hazard symbols



Signal word: Danger

Hazard statements: H225-Highly flammable liquid and vapour.  
H302-Harmful if swallowed.

Precautionary statements: H411-Toxic to aquatic life with long lasting effects.  
P210-Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P270-Do not eat, drink or smoke when using this product.  
P264-Wash hands and face thoroughly after handling.  
P280-Wear protective gloves, eye protection.  
P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P403+P235-Store in a well-ventilated place. Keep cool.  
May cause polymerization.

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

PBT: Not applicable  
vPvB: Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Components: 2-Methyl-2-butene  
Percent: >95.0%(GC)  
CAS RN: 513-35-9  
EC-No: 208-156-3  
Synonyms: Amylene , Pentene  
Chemical Formula: C<sub>5</sub>H<sub>10</sub>

#### SECTION 4: First aid measures

##### 4.1 Description of first aid measures

<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
<b>Skin contact:</b>	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.
<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion:</b>	Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
<b>Protection of first-aiders:</b>	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

##### 4.2 Most important symptoms and effects, both acute and delayed

No data available

##### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

#### SECTION 5: Firefighting measures

##### 5.1 Extinguishing media

<b>Suitable extinguishing media:</b>	Dry chemical, foam, carbon dioxide.
<b>Unsuitable extinguishing media:</b>	Water (It may scatter and spread fire.)

##### 5.2 Special hazards arising from the substance or mixture

This substance may polymerize explosively when heated or involved in a fire. Container may explode when heated. Combat fire from a sheltered position. Carbon dioxide, Carbon monoxide

##### 5.3 Advice for firefighters

Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so. When extinguishing fire, be sure to wear personal protective equipment

#### SECTION 6: Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures

Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc

##### 6.2 Environmental precautions

Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned

##### 6.3 Methods and materials for containment and cleaning up

Absorb spilled material in dry sand or inert absorbent before recovering it into a covered container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

##### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

##### 7.1 Precautions for safe handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid contact with skin, eyes and clothing.

##### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store away from incompatible materials such as oxidizing agents.  
Heat-sensitive

##### 7.3 Specific end use(s)

No further relevant information available.

#### SECTION 8: Exposure controls/personal protection

##### 8.1 Control parameters

No data available

##### 8.2 Exposure controls

Install a closed system or local exhaust. Also install safety shower and eye bath.

###### Respiratory protection:

Vapor respirator. Follow local and national regulations.

###### Hand protection:

Protective gloves.

###### Eye protection:

Safety glasses. A face-shield, if the situation requires.

###### Skin and body protection:

Protective clothing. Protective boots, if the situation requires.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state (20°C):	Liquid
Form:	Clear
Colour:	Colorless - Almost colorless
Odour:	Unpleasant
pH:	No data available
Melting point/freezing point:	-134°C
Boiling point/range:	38°C
Flash point:	-45°C
Evaporation rate(Butyl Acetate=1):	No data available
Flammability(solid, gas):	No data available
Flammability or explosive limits:	
Lower:	1.6%
Upper:	7.7%
Vapour pressure:	62.3kPa/25°C
Vapour density:	2.4
Relative density:	0.66
Solubility(ies):	
[Water]	Insoluble (190mg/L, 22°C)
[Other solvents]	
Miscible:	Ether, Alcohols
Soluble:	Benzene
Partition coefficient:	2.67
n-octanol/water:	
Autoignition temperature:	240°C
Decomposition temperature:	No data available
Dynamic Viscosity:	No data available
Kinematic viscosity:	No data available

9.2 Other safety information No data available

## SECTION 10: Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Polymerization may occur under the influences of heat, light or on contact with polymerization initiators such as peroxides etc.
10.3 Possibility of hazardous reactions	No special reactivity has been reported.
10.4 Conditions to avoid	Heat, Spark, Open flame, Static discharge, Light
10.5 Incompatible materials	Oxidizing agents, Acids
10.6 Hazardous decomposition products	Carbon dioxide, Carbon monoxide

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute Toxicity:	No data available
Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	No data available
STOT-single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard:	No data available

## SECTION 12: Ecological information

<b>12.1 Toxicity</b>	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
<b>12.2 Persistence and degradability</b>	No data available
<b>12.3 Bioaccumulative potential</b>	23
<b>12.4 Mobility in soil</b>	
Log Pow:	2.67
Soil adsorption (Koc):	68
Henry's Law (PaM <sup>3</sup> /mol):	1.1 x 10 <sup>4</sup>
<b>12.5 Results of PBT and vPvB assessment</b>	
PBT:	Not applicable
vPvB:	Not applicable
<b>12.6 Other adverse effects</b>	No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

## SECTION 14: Transport information

<b>14.1 UN number</b>	2460
<b>14.2 UN proper shipping name</b>	
ADR/RID	2-Methyl-2-butene
IMDG/IMO	2-Methyl-2-butene
ICAO/IATA	2-Methyl-2-butene
<b>14.3 Transport hazard class(es)</b>	
ADR/RID	3: Flammable liquid
IMDG/IMO	3: Flammable liquid
ICAO/IATA	3: Flammable liquid
<b>14.4 Packaging group</b>	
ADR/RID	II
IMDG/IMO	II
ICAO/IATA	II
<b>14.5 Environmental hazards</b>	
Marine pollutant	Y
<b>14.6 Special precautions for user</b>	No data available

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Water Hazard Classes (WGK) :	Class 3 - Severe hazard to waters
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No.1907/2006	Not listed

<b>15.2 Chemical safety assessment</b>	A chemical safety assessment has not been carried out.
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**SECTION 16: Other information**

**Prepared by:** TCI EUROPE N.V.  
**Issue date:** 10/03/2018

This SDS was prepared sincerely on the basis of the information we could obtain, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

**End of Safety Data Sheet**