

	MSDS	ISSUE DATE	June-2020
	Butene-1	WWW.TPCO.IR	
IRAN/TABRIZ/TABRIZ PETROCHEMICAL COMPANY/P.O.BOX:51745-354/TEL:+984134282612		Page:1/5	

1. Chemical product and company identification :

Product name: Butene-1

Company Identification: Tabriz petrochemical company

Synonym : α -Butene; α -Butylene; But-1-ene; Butene-1; Ethylethylene; 1-Butylene; 1-C₄H₈

2. Hazards identification :

Physical state: gas

Inhalation:

Emergency overview:

Keep away from heat, sparks and flame. Do not puncture or incinerate container. Use only with adequate ventilation. Keep container closed. Contact with rapidly expanding gas may cause burns or frostbite.

Routes of entry: Inhalation

Potential acute health effects:

Eyes: Contact with rapidly expanding gas may cause burns or frostbite.

Skin: Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation: Acts as a simple asphyxiated.

Ingestion: Ingestion is not a normal route of exposure for gases.

Potential chronic health effects:

Carcinogenic effects: Not available.

Mutagenic effects: Not available.

Medical conditions aggravated by overexposure:

Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

See toxicological information (See No.11)

3. Composition, Information on Ingredients:

Name: 1-Butene, CAS NO: 106-98-9, % Volume=100

TWA: 250 ppm 8 hour(s).from ACGIH

4. First aid measures:

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

	MSDS	ISSUE DATE	June-2020
	Butene-1	WWW.TPCO.IR	
IRAN/TABRIZ/TABRIZ PETROCHEMICAL COMPANY/P.O.BOX:51745-354/TEL:+984134282612		Page:2/5	

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes.

To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it.

Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Frostbite: Try to warm up the frozen tissues and seek medical attention.

Inhalation:

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

5. Fire-fighting measures :

Flammability of the product: Flammable.

Auto-ignition temperature: 384.85°C (724.7°F)

Flammable limits: Lower: 1.6% Upper: 9.3%

Products of combustion: Decomposition products may include the following materials:

Carbon dioxide

Carbon monoxide

Fire-fighting media and instructions:

In case of fire, use water spray (fog), foam or dry chemical. In case of fire, allow gas to burn if flow cannot be shut off immediately. Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shutoff flows immediately if it can be done without risk.

Special protective equipment for fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures :

Personal precautions: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

	MSDS	ISSUE DATE	June-2020
	Butene-1	WWW.TPCO.IR	
IRAN/TABRIZ/TABRIZ PETROCHEMICAL COMPANY/P.O.BOX:51745-354/TEL:+984134282612		Page:3/5	

Methods for cleaning up:

Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage :

Handling:

Use only with adequate ventilation. Use explosion-proof electrical equipment. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Keep container closed. Keep away from heat, sparks and flame. To avoid fire, eliminate ignition sources. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Storage:

Keep container in a cool, well-ventilated area. Keep container tightly closed and seal. Avoid all possible sources of ignition (spark or flame). Segregate from oxidizing materials. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Engineering controls:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8. personal protection:

Eyes:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

	MSDS	ISSUE DATE	June-2020
	Butene-1	WWW.TPCO.IR	
IRAN/TABRIZ/TABRIZ PETROCHEMICAL COMPANY/P.O.BOX:51745-354/TEL:+984134282612		Page:4/5	

Respiratory:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard. Respirator selection must be based on known or anticipated exposure levels.

Hands:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Personal protection in case of a large spill:

Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

9. Physical and chemical properties :

Molecular weight: 56.11 g/mole

Molecular formula: C₂H₅CH=CH₂

Boiling/condensation point: -6.4°C (20.5°F)

Melting/freezing point: -185°C (-301°F)

Critical temperature: 419.4°C (786.9°F)

Vapor pressure: 23.5 (psig)

Vapor density: 1.9 (Air = 1)

Specific Volume (ft³/lb): 6.8965 Gas Density (lb/ft³): 0.145

10. Stability and reactivity :

Stability and reactivity: The product is stable.

Incompatibility with various substances:

Extremely reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Consult local authorities for acceptable exposure limits.

Hazardous polymerization:

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information :

Toxicity data:

Other toxic effects on humans:

No specific information is available in our database regarding the other toxic effects of this material to humans. (TLV=250ppm)

Specific effects:

Carcinogenic effects: No known significant effects or critical hazards.

	MSDS	ISSUE DATE	June-2020
	Butene-1	WWW.TPCO.IR	
IRAN/TABRIZ/TABRIZ PETROCHEMICAL COMPANY/P.O.BOX:51745-354/TEL:+984134282612		Page:5/5	

Mutagenic effects: No known significant effects or critical hazards.
 Reproduction toxicity: No known significant effects or critical hazards.

12. Ecological information :

Aquatic eco toxicity: Not available.
 Products of degradation: carbon oxides (CO, CO₂) and water.
 Environmental fate: Not available.
 Environmental hazards: No known significant effects or critical hazards.
 Toxicity to the environment: Not available.

13. Disposal considerations :

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local.

14. Transport Information:

According to local regulation with reference to NFPA rating

15. Regulatory Information:

National Fire Protection Association (U.S.A.):
 Health: 1
 Flammability: 4
 Instability: 0

16. Other Information:

Although the information contained in this document is presented in good faith, base on available information believed to be reliable at the time of preparation of this document, TPC makes no warranties or representations with respect to the information or the products described herein, and expressly disclaims all implied warranties and conditions (including all warranties and conditions of merchantability or fitness for a particular purpose).this information is subject to change without notice. Responsibility for use, storage, handling and disposal of the products described herein, whether alone or in combination with any other substance, is that of the purchaser and/or end user.