



STP-FP-216 v. 002 - 07/04/2022

Propylene

PERFORMANCES

Propylene (C₃H₆) or propene is a flammable gas. **Not very harmful** but slightly narcotic, it is mainly used in the chemical industry for the production of: **propylene oxide, propylene glycol, polypropylene, acrolein, isopropanol, allyl chloride.**

This C₃ cut is purified by successive distillations, followed by selective hydrogenation, **in order to eliminate most impurities** such as propadiene and methyl acetylene. The propylene resulting degree of purity is enough for most applications.

SPECIFICATIONS

Standard characteristics	Limit values
Appearance	Clear
Purity	≥ 99 % volume
Propane content	≤ 0,8 % volume
1,3-butadiene content	≤ 50 ppm volume
Non-condensable (N ₂ + O ₂ + H ₂ + CO + CO ₂)	≤ 200 ppm volume
Propadiene (allene) content	≤ 5 ppm volume
Acetylene derivatives content	≤ 5 ppm volume
Water content	≤ 20 ppm weight
Sulphur content	≤ 2 ppm volume

CHARACTERISTICS

		Units	Values
Chemical Formula			CH ₂ -CH=CH ₂
Molecular weight		g/mol	42.1
Boiling point	Initial, below 1.013 bar	°C	-47.7
Melting point	below 1.013 bar	°C	-185
Critical temperature		°C	91.1
Critical pressure		bar	45.6
Latent heat of vaporization	below 1.013 bar	kJ/kg	439
Latent heat of melting	below 1.013 bar	kJ/kg	69.8
Liquid density	at 20°C	kg/m ³	520
Vapor pressure	at 20°C	bar absolute	10.2
Lower flammability limit	in the air at 20°C	% in volume	2.0
Upper flammability limit	below 1.013 bar		11.1
Auto-ignition temperature	below 1.013 bar	°C	460



PACKAGING

	Bottles		Container	Bulk
Capacity (liter)	26	88	930	5 to 20 T
Tare (kg)	16	38	460	
Load (kg)	11	35	390	
Diameter (mm)	300	300	860	
Height (mm)	630	1530	2330	
Outflow external diameter (mm)	21.7	21.7	26.1	
Tap: left pitch (mm)	1.814	1.814	1.814	
Test pressure (bar)	33	33	33	

- Packaging technical characteristics are available upon request to the commercial department.
- Feasibility of filling packaging of the customers if they are in conformity with the legislation.
- Contact us for any other specific packaging.

STORAGE AND SHELF LIFE

Precautions for handling and storage:

French plants are controlled by the regulation of listed Establishments and have to comply with it (or with the local legislation).

- All packaging will be stored in a dry, well ventilated, easily accessible place, sheltered from sunlight and bad weather, away from any ignition source.
- It is recommended to store all packaging either in a specific place or isolated and sheltered by a fence.
- All packaging and piping will be grounded to discharge static electricity.
- Leak detectors, put at ground level, will be connected to an audible alarm, which will trigger in the event of leaks.
- The whole equipment will be tested with an appropriate leak detector before use.

Climalife can study the set up and assembling of your storage tanks, piping, and pumps, according to the prevailing regulations.

Shelf life: unlimited (if appropriate storage conditions).



CONDITIONS OF USE

Please refer to the Material Safety Data Sheet (MSDS) before using the product.

Workers handling the product should be trained about risks and preventive measures.

The product is compatible with:

COMPATIBILITY	INCOMPATIBILITY
<p>Plastics:</p> <ul style="list-style-type: none">▪ Teflon®▪ Polyvinyl chloride (PVC) <p>Elastomers:</p> <ul style="list-style-type: none">▪ Viton® <p>Metals:</p> <ul style="list-style-type: none">▪ Ordinary steel	<ul style="list-style-type: none">▪ Nitrile▪ EPDM▪ Strong bases▪ Oxidizing agents▪ Combustive agents

The information above is intended as a guide only. We assume no liability for its accuracy on its use. The user should make its own tests under its conditions to determine the suitability of any compound in a peculiar application.

Handle:

- **Collect vapors at emission point,**
- **Use spark-free tools (beryllium bronze),**
- **Ground the equipment,**
- **Work in a well ventilated premises to avoid accumulating static discharges.**

HEALTH SAFETY ENVIRONMENT (HSE)

Consult the Material Safety Datasheet (MSDS) on the website: www.quickfds.com

This data is based on information that the manufacturer believed to be reliable and offered in good faith. In no event will Climalife be responsible for special, incidental and consequential damages. The user is responsible, to the Administrative Authorities (Regulation of the listed establishments for the protection of the environment), for the conformity of his installation.