

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
Composition : propylene butadiene acethylenics propadiene	 ≥ 99,5 % volume ≤ 0,2 % volume ≤ 5 ppm volume ≤ 15 ppm volume
Moisture content	≤ 5 ppm weight
Total sulphur	≤ 2 ppm weight

CHARACTERISTICS

		Units	Values
Chemical Formula			CH ₂ -CH=CH ₂
Molecular weight		g/mol	42,08
Boiling point	at 1,013 bar	°C	-47
Melting point	at 1,013 bar	°C	-185
Critical temperature		°C	91,6
Critical pressure		bar	46,1
Latent heat of vaporization		kcal/kg	104,6
Latent heat of melting		kcal/kg	17,05
Liquid density	at 15°C	kg/dm ³	524
Vapor pressure	at 20°C	bar absolute	10,3
Lower flammability limit	in the air at 20°C below 1,013 bar	% in volume	2
Upper flammability limit			11,1
Auto-ignition temperature	below 1,013 bar	°C	455

PACKAGING

	Bottles		Container
Capacity (liter)	26	88	930
Tare (kg)	16	38	460
Load (kg)	11	35	400
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)	30	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.
- Material and electrical equipment in an explosive atmosphere will comply with the regulations (*grounding, equipotential bonding, ATEX material*).

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

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.

Propylene is compatible with:

- **The following plastics:**
 - Polyamide
 - Polyurethane
 - PVC
 - Polytetrafluorethylene
- **The following elastomers:**
 - BUNA N[®]
- **The following metals:**
 - Steel
 - Any ordinary metal (propylene is not corrosive)

Propylene is not compatible with:

- Polyethylene
- Polystyrene
- Polyisobutylene
- Buna S[®]
- Strong bases
- Oxidizing agents
- Combustive agents

Whatever the material, we advise to carry out resistance tests before use.

HEALTH SAFETY AND ENVIRONMENT (HSE)

Symbols and warnings:

EXTREMELY FLAMMABLE (F+)

Risks	
R 12	Extremely flammable

Safety	
S 9	Keep container in a well-ventilated place.
S 16	Keep away from ignition sources. No smoking.
S 33	Take precautionary measures against static discharges.

Exposure Limit Value USA (TLV-TWA 8 hours)	600 ppm V
CAS number	115-07-1 : propylene
EINECS number	204-062-1 : propylene
ODP (Ozone Depletion Potential)	0
VOC (Volatile Organic Compound)	yes (according to the European definition)

As environmental index calculations evolve constantly, the figures above are communicated as an indication only.

This data is based on information that the manufacturer believed to be reliable and offered in good faith. On no account, Inventec will 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.