

# Propene



Propylene

## Marking

CAS

Characterization acc. ADR

Cylinder Marking

115-07-1  
UN 1077 PROPYLENE, 2.1,  
(B/D)



Shoulder color: red

## Essential properties

liquified gas, heavier than air, colorless, flammable

## Symbols of risks



## Physical Properties

molecular weight	42,080 kg/kmol
gas density at 0 °C and 1,013 bar	1,9138 kg/m <sup>3</sup>
density ratio to air	1,4802
vapour pressure at 20 °C	10,199 bar

For additional safety information see safety data sheet \*-C3H6-105

## Valves / Manifolds

Valve connection

acc. to national regulations



Recommended Manifolds

Spectrolab control valve PN 40

Specification / receptacles			
		Propylene 2.5	
<b>Composition</b>			
C <sub>3</sub> H <sub>6</sub>	≥	99.5	Vol.-%
<b>Impurities</b>			
C <sub>3</sub> H <sub>8</sub>	≤	4,000	ppmv
other HC	≤	1,000	ppmv
<b>Cylinder / Contents</b>			
F 27 11kg		11.0	kg
F 79 33kg		33.0	kg

## Remarks

Applications:

Precursor for polypropylene

Polymerisation catalyst research

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**Description**

Colourless, highly flammable, liquified gas. Forms explosive mixtures in air. Violent reactions with strong oxidizers. Catalytic polymerisation.

**Materials**

Cylinders and valves: any usual materials

Seals: PTFE, PCTFE, PVDF, PP

Physical Properties			
molecular weight	42,080 kg/kmol	vapour pressure at 20 °C	
critical point		gas density at 0 °C and 1,013 bar	1,9138 kg/m <sup>3</sup>
temperature	365,57 K	density ratio to air	1,4802
Pressure	46,646 bar	gas density at 15 °C and 1 bar	1,755 kg/m <sup>3</sup>
density	0,22339 kg/l	conversion factor	
triple point		liquid at Ts to m <sup>3</sup> gas (15 °C, 1 bar)	
temperature	87,89 K	virial coefficient	
Pressure	9,5*10 <sup>-9</sup> bar	Bn at 0 °C	-18,7*10 <sup>-3</sup> bar <sup>-1</sup>
boiling point		B30 at 30 °C	-13,4*10 <sup>-3</sup> bar <sup>-1</sup>
temperature	225,46 K; -47,7 °C	gaseous state at 25 °C and 1 bar	
liquid density	0,60941 kg/l	specific heat capacity cp	1,5306 kJ/kg K
evaporation heat	439,5 kJ/kg	thermal conductivity	170*10 <sup>-4</sup> W/m K
		dynam. viscosity	8,5*10 <sup>-6</sup> Ns/m <sup>2</sup>