



R-290

Propane C₃H₈

GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATION	LIMIT VALUE
Purity*	≥ 9.5 % weight*
Total polyolefins C3 – C4 – C5	≤ 0.05 % weight
Other volatile impurities	≤ 0.5 % weight
High boiling residues	≤ 0.01 % weight
Non-condensable content (gas phase)	≤ 1.5 % volume at 25°C
Moisture content	≤ 10 mg/kg
Odour of sulphur	Odourless
Acidity (HCl)	≤ 1 ppm weight
Particles / Solids	Clear

* of which 2% other C3 – C4 saturated hydrocarbons allowed

MAIN APPLICATIONS

High purity propane (R-290) is a hydrocarbon (HC) used in refrigeration applications, in compliance with AHRI requirements.

OILS

Use a mineral oil (MN), alkylbenzene (AB) or poly alphaolefin (PAO).

Check with Climalife for the viscosity of the oil s elected according to your application, and its miscibility with the fluid in question.

PRECAUTIONS OF USE

Refer to the Safety Data Sheet **.

REGULATION

R-290 is classified as extremely flammable (A3).

Refer to the decree of 14 February 2000 (ERP) published in the J.O. of 21 March 2000.

Refer to the regulations in force in the country concerned.

**Find the Safety Data Sheets (SDS) directly on our website www.climalife.dehon.com



PHYSICAL PROPERTIES OF R-290

Molar mass	g/mol	44.10
Melting point	°C	-187.62
Boiling point (at 1.013 bar)	°C	-42.12
Temperature drop below 1.013 bar	K	0
Saturated liquid density at 25°C	kg/m ³	492
Vapour density at boiling point	kg/m ³	2.416
Vapour pressure :		
25°C	bar	9.52
50°C		17.13
Critical temperature	°C	96.70
Critical pressure	bar	42.51
Critical density	kg/m ³	220
Latent heat of vaporisation at boiling point	kJ/kg	425.60
Thermal conductivity at 25°C		
Liquid	W/m.K	0.094
Vapour at 1.013 bar		0.018
Surface tension at 25°C	10 ⁻³ N/m	7.02
Viscosity at 25°C		
Liquid	10 ⁻³ Pa.s	0.097
Vapour at 1.013 bar		0.008
Specific heat at 25°C		
Liquid	kJ/(kg.K)	2.719
Vapour at 1.013 bar		1.685
CP/CV ratio at 25°C at 1.013 bar		1.136
Flammability in air		Non-flammable
Flash point	°C	-104
Classification NF-EN 378		A3
ASHRAE		A3
Ozone Depletion Potential	(R-11 = 1)	0
GWP according to IPCC-AR4/IPCC-AR5	(CO ₂ = 1)	3/3

Please contact your distributor or **Climalife** sales department for more information. In addition, if the refrigeration system you want to install, or are working on, does not appear to be a typical installation, please do not hesitate to contact us for advice and information.

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