

Cosutin Industrial CO., Limited

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HC-290 (R290)

GENERAL DESCRIPTION

HC-290 is pure propane and is primarily used in commercial and industrial refrigeration systems and chiller applications that previously would have used refrigerants such as R22, R502 or R404A. It exhibits similar pressures and refrigeration capacity to both R22 and R404A with discharge temperatures significantly lower than R22 allowing single stage compression down to approximately -40°C as typically found in R404A systems. Equipment must be specifically designed for its use to.

HC-290 organic based, naturally occurring, non-ozone depleting and environmentally friendly refrigerants with negligible global warming potential. It is suitable for use in a wide spectrum of domestic, commercial and industrial applications and in certain types of air conditioning systems.

HC-290 can be used with most commonly used refrigeration lubricants and are particularly suited to mineral oils and alkyl benzene lubricants. Polyalphaolefins (POA) and Polyalkyleneglycol (PAG) are also acceptable for use where approved by the compressor manufacturer. However solubility tends to be increased with hydrocarbon refrigerants and it may be necessary to select a higher grade viscosity than for HFCs. This is particularly the case with Polyolester (POE) lubricants. Consult the compressor manufacturer for recommendation.

SPECIFICATIONS

Appearance :	Colourless and not turbid
Purity, %	≥99.5%
Sulfur, ppm	≤1.0
Moisture, ppm	≤10
Non-condensable gases, %(V/V)	≤1.5
Odor	Odorless

PROPERTIES

HC-290

CAS Number: 74-98-6

Colour: Colourless

Smell: Odorless

Appearance: Colourless and not turbid

Chemical name: Propane

Chemical formula: C₃H₈

Molecular weight: 44

Solubility in water [mg/l]: 75

Boiling point (°C): -42.1

Melting point (°C): -188.0

Relative density, gas (air=1): 1.5

Relative density, liquid (water =1): 0.58

Vapour pressure (20°C): 8.3 bar

Flammability range [vol% in air]: 1.7 to 9.5

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Auto ignition temperature [°C]: 470

Other data: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

Handling method and safety information

HC-290 is Extremely flammable liquefied gas. Read the Material Safety Data Sheet (MSDS) before use.

Packaging specifications

Filled in 5kg/926L cylinders, ISO tank.