VIN-FP-533/008

R-227ea

1,1,1,2,3,3,3 – HEPTAFLUOROPROPANE CF3-CHF-CF3

GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATIONS	LIMIT VALUE
Purity	≥ 99.5 % weight
Water content	≤ 10 ppm weight
Non-condensable content (gas phase)	≤ 1.5 % volume
High-boiling residues	≤ 0.01 % volume
Total acidity (HCl)	≤ 1 ppm weight

MAIN APPLICATIONS

R-227ea is a hydrofluorocarbon (HFC) which can in some applications replace R-114 (CFC) whose production was stopped in the European Union on 31.12.1994.

It is particularly suitable for air conditioning systems which work in high temperature environments, high temperature heat pumps, and thermal collectors. Today it is replaced in new installations in some applications by R-1234ze.

R-227ea is also used as an extinguishing agent replacing "bromofluorocarbon" compound R-13B1 whose production was stopped in the European Union as of 31.12.1993.

OILS

Use a polyol ester (POE) oil.

Check with **Climalife** regarding the viscosity of the oil selected for your application, and the miscibility with the fluid under consideration.

PRECAUTIONS OF USE

Refer to the Safety Data Sheet*.

REGULATION

The use and implementation of R-227ea are governed by EU Regulation n° 517/2014.

The recovery of R-227ea is mandatory under EU Regulation n° 517/2014.

(Refer to the regulations enforced in each country)

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

R-227ea PHYSICAL PROPERTIES

Molar mass	g/mol	170.03
Melting point	°C	-126.8
Boiling point (at 1.013 bar)	°C	-16.35
Saturated liquid density at 25°C	kg/m^3	1388
Saturated vapour density at boiling point	kg/m^3	8.484
Vapour pressure at 25°C Vapour pressure at 50°C	bar	4.55 9.16
Critical temperature Critical pressure Critical density	°C bar kg/m^3	101.8 29.25 594
Latent heat of vaporisation at boiling point	KJ/kg	131.77
Thermal conductivity of liquid at 25°C Thermal conductivity of vapour at 1.013 bar	W/(m.K) W/(m.K)	0.060 0.013
Surface tension at 25°C	10^{-3} N/m	7.04
Viscosity of liquid at 25°C Viscosity of vapour at 1.013 bar	10^{-3} Pa-s 10^{-3} Pa-s	 0.239 0.012
Specific heat of liquid at 25°C Specific heat of vapour at 1.013 bar	kJ/(kg.K) kJ/(kg.K)	1.182 0.813
Cp/Cv ratio at 25°C at 1.013 bar		1.075
Flammability in air		non-flammable
Flash point		None
Classification NF-EN 378 ASHRAE		 A1 A1
Potential effect on ozone	(R-11 = 1)	0
GWP According to IPCC-AR4/IPCC-AR5	(CO_2 = 1)	 3220/3350

Please contact your distributor or our **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.