



Refrigerants

R-245fa

1,1,1,3,3 – PENTAFLUOROPROPANE $\text{CF}_3\text{-CH}_2\text{-CHF}_2$

GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATION	LIMIT VALUE
Purity	$\geq 99.5\%$ weight
Water content	$\leq 20\text{ ppm}$ weight
Non-condensable content (gas phase)	$\leq 1.5\%$ volume
High boiling residues	$\leq 0.01\%$ volume
Total Acidity (HCL)	$\leq 1\text{ ppm}$ weight

MAIN APPLICATIONS

R-245fa is a hydrofluorocarbon (HFC). It is used for new installations as a specialist refrigerant in industrial air conditioning, air conditioning in buildings, Organic Rankine Cycle (ORC) heat recovery systems and for energy recovery systems at high ambients. It can also be used in high power installations equipped with centrifugal compressors (one or more stages) and can replace HCFC R-123. R-1233zd is an alternative to R-245fa and R-123 in new installations only.

OILS

Use a polyol ester (POE) oil.

Consult **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

Use, implementation and recovery of R-245fa are governed by European regulation no. 2024/573.

It is also important to refer to the regulations in force in each country in Europe and outside Europe.

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



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PHYSICAL PROPERTIES OF R-245fa

Molar mass	g/mol	134.05
Melting point	°C	-102.1
Boiling point (at 1.013 bar)	°C	15.13
Saturated liquid density at 25°C	kg/m ³	1339
Vapour density at boiling point	kg/m ³	5.960
Vapour pressure at:		
25°C	bar	1.48
50°C	bar	3.44
Critical temperature	°C	154.01
Critical pressure	bar	36.51
Critical density	kg/m ³	516
Latent heat of vaporisation at boiling point	kJ/kg	196.05
Thermal conductivity at 25°C		
Liquid	W/m.K	0.088
Vapour at 1.013 bar	W/m.K	0.013
Surface tension at 25°C	10 ⁻³ N/m	13.63
Solubility of the fluid in the water at 25°C	% weight	0.16
Viscosity at 25°C		
Liquid	10 ⁻³ Pa.s	0.401
Vapour at 1.013 bar	10 ⁻³ Pa.s	0.01
Specific heat at 25°C		
Liquid	kJ/(kg.K)	1.322
Vapour at 1.013 bar	kJ/(kg.K)	0.920
Cp/Cv ratio at 25°C at 1.013 bar		1.101
Flammability in air		Non-flammable
Flash point		None
Classification NF-EN 378 / ASHRAE PE(S)R		B1 Category 2
Ozone Depletion Potential	(R11 = 1)	0
GWP according to Regulation (EU) 2024/573 (F-Gas III)		1030 (CO ₂ = 1)
GWP (AR4 / AR6)		1030 / 962

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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