



VIN-FP-223/006

# climalife®

## R-1234yf

2,3,3,3-tetrafluoroprop-1-ene

### GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATION*	LIMIT VALUE
Purity	≥ 99.5 % weight
Water content	≤ 20 ppm weight
Chlorine ion test (silver nitrate test)	Negative
Total Acidity (HCL)	≤ 1 ppm weight
Non-condensable content (gas phase)	≤ 1.5 % volume

\* (data producer)

### MAIN APPLICATIONS

**R-1234yf** is a single component HFO. This product has a very low GWP figure and is suitable for automotive air conditioning applications. It may also be suitable as a R-134a replacement in other applications.

### OILS

Use a poly alkylene glycol (PAG) oil for automotive air conditioning applications. For all other applications use a polyol ester (POE) oil.

### PRECAUTIONS OF USE

Refer to the Safety Data Sheet\*.

### REGULATION

The use and implementation of **R-1234yf** are governed by EU Regulation n° 517/2014.

The recovery of **R-1234yf** is mandatory under EU Regulation n° 517/2014.

(Refer to regulations enforced in each country)

\* Find the Safety Data Sheet (SDS) directly on our website [www.climalife.dehon.com](http://www.climalife.dehon.com)



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## PHYSIO-CHEMICAL PROPERTIES OF R-1234YF

Molar mass	g/mol	114.04
Boiling point (at 1.013 bar)	°C	-29.49
Saturated fluid density at 25°C	kg/m <sup>3</sup>	1092
Vapour density at boiling point	kg/m <sup>3</sup>	5.980
Vapour pressure at:		
25°C	bar	6.83
50°C	bar	13.02
Critical temperature	°C	94.70
Critical pressure	bar	33.82
Critical density	kg/m <sup>3</sup>	476
Latent heat of vaporisation at boiling point	kJ/kg	180.25
Thermal conductivity of liquid at 25°C	W/m.K	0.064
Thermal conductivity of vapour at 1.013 bar	W/m.K	0.014
Surface tension at 25°C	10 <sup>-3</sup> N/m	6.17
Viscosity of liquid at 25°C	10 <sup>-3</sup> Pa.s	0.154
Viscosity of vapour at 1.013 bar	10 <sup>-3</sup> Pa.s	0.011
Specific heat of liquid at 25°C	kJ/(kg.K)	1.392
Specific heat of vapour at 1.013 bar	kJ/(kg.K)	0.905
Cp/Cv ratio at 25°C under 1.013 bar		1.099
Flammability in air		Mildly flammable
Flashing point		None
Classification NF-EN 378		A2L
ASHRAE		A2L
PED		PED Category 2
Ozone Depletion Potential		0
GWP		
4 <sup>th</sup> Assessment		4
5 <sup>th</sup> Assessment		1

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.

The information contained in this product sheet is the result of our studies and experience. It is provided in good faith, but should not, under any circumstance, be taken to constitute a guarantee on our part or an assumption of our responsibility. This is particularly the case when third party rights are at stake or in situations where a user of one of our products fails to observe applicable regulations.

For more information, please visit our website:



[http://www.climalife.dehon.com/contact\\_us](http://www.climalife.dehon.com/contact_us)