



## R-23

(TRIFLUOROMETHANE – CHF<sub>3</sub>)

### GUARANTEED COMMERCIAL SPECIFICATIONS

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

### MAIN APPLICATIONS

R-23 is a "hydrofluorocarbon" (HFC) intended for very low temperatures (-60 to -100°C) applications with reciprocating or rotary compressors.

It is used for the second stage in a cascade refrigeration system, the first stage may be operating with R-404A or R-507 (climatic test chamber, freeze-dry system).

### 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-23 are governed by EU Regulation n° 517/2014.

The recovery of R-23 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](http://www.climalife.dehon.com).



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## R-23 PHYSICAL PROPERTIES

Molar mass	g/mol	70.01
Melting point	°C	-155.2
Boiling point (at 1.013 bar)	°C	-82.1
Saturated liquid density at -30°C	kg/m <sup>3</sup>	1230
Saturated vapour density at boiling point	kg/m <sup>3</sup>	4.649
Vapour pressure at 25°C	bar	47.3
Critical temperature	°C	25.92
Critical pressure	bar	48.36
Critical density	kg/m <sup>3</sup>	626
Latent heat of vaporisation at boiling point	kJ/kg	240.7
Thermal conductivity of liquid at -10°C	W/(m.K)	0.082
Thermal conductivity of vapour under 1.013 bar	W/(m.K)	0.016
Viscosity of liquid at -10°C	10 <sup>-3</sup> Pa-s	0.11
Viscosity of vapour at 1.013 bar		0.014
Cp/Cv ratio at -10°C at 1.013 bar		1.724
Flammability in air		non-flammable
Flash point		none
NF-EN 378 classification		L1
Ozone Depletion Potential	(R-11=1)	0
GWP	(CO <sub>2</sub> = 1)	14800

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.

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.

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