



R-123

(1,1 DICHLORO - 2,2,2, TRIFLUOROETHANE CHCL₂-CF₃)

GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATIONS	LIMIT VALUE
Purity	≥ 99.5 % weight
Water content	≤ 20 ppm weight
Chlorine ion test (silver nitrate test)	negative
Acidity (HCl)	≤ 1 ppm weight
High-boiling residues	≤ 0.01 % volume

MAIN APPLICATIONS

R-123 is a HCFC type "hydrochlorofluorocarbon" transition compound of usage regulated over time (Montreal Protocol), used in industrial and building air-conditioning for intermediate water and fluid cooling, in large power setups equipped with centrifugal compressors (one or more stages) for replacing R-11 (CFC).

OILS

Use a mineral (MN) 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*.

VORSCHRIFTEN

Using **R-123** is governed by European regulation n° 2037/2000 of June 29, 2000:

- using **R-123** is completely prohibited in new setup as of 12.31.2003
- using virgin **R-123** is prohibited for maintenance and service as of 01.01.2010
- using **R-123**, even recycled, is completely prohibited as of 01.01.2015.

In Europe, **R-123** recovery is mandatory as per regulation n° 842/2006.

(Refer to regulations enforced in each country)

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



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R-123 PHYSICOCHEMICAL PROPERTIES

Molar mass	g/mol	152,93
Melting point	°C	- 107,15
Boiling point (under 1.013 bar)	°C	27,82
Temperature drift under 1.013 bar	K	0
Saturated fluid density at 25°C	kg/m3	1464
Saturated vapour density at boiling point	kg/m3	6,47
Vapour pressure at: 25°C 50°C	bar	0,9136 2,125
Critical temperature Critical pressure Critical density	°C bar kg/m3	183,68 36,62 550
Latent heat of vaporisation at boiling point	kJ/kg	170,2
Thermal conductivity at 25°C Liquid Vapour under 1.013 bar	W/(m.K)	0,07642 0,0095
Surface tension at 25°C	10-3 N/m	15,18
Solubility at 25°C of the fluid in water under 1.013 bar of water in the fluid	% weight % weight	0,21 0,066
Viscosity at 30°C Liquid Vapour under 1.013 bar	10-3 Pa-s	0,394 0,01092
Specific heat at 30°C Liquid Vapour under 1.013 bar	kJ/(kg.K) kJ/(kg.K)	1,026 0,7024
Cp/Cv ratio at 30°C under 1.013 bar		1,107
Flammability in air		non-flammable
Flashing point		none
NF-EN 378 classification		L2
Potential effect on ozone	(R11 = 1)	0,02

Please contact your distributor or **Climalife** sales department for more information. Also, if the refrigerated system you want to install does not appear to you as a typical case, we are at your service to provide opinions and advices.

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

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