



Refrigerants

Solstice[®] zd

R-1233zd - Trans-1-chloro-3,3,3-trifluoropropene

GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATION	LIMIT VALUE
Purity	≥ 99.5 % weight
Water content	≤ 20 ppm weight
Total Acidity (HCL)	≤ 1 ppm weight
Non-condensable content (gas phase)	N/A

MAIN APPLICATIONS

R-1233zd is a pure HFO with very low GWP. It is suitable for new installations in industrial air conditioning applications or in installations equipped with centrifugal compressors. Its low pressure makes it a motor fluid for organic rankine cycle (ORC) turbines.

OILS

Use a polyol ester (POE) oil.

Consult **Climalife** regarding the viscosity of the oil selected for your application and the most suitable for your application.

PRECAUTIONS OF USE

Refer to the Safety Data Sheet*.

REGULATION

Use, implementation and recovery of R-1233zd 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


PHYSICO-CHEMICAL PROPERTIES OF SOLSTICE® zd

Molar mass	g/mol	130.5
Boiling point (at 1.013 bar)	°C	18.26
Saturated liquid density at 25°C	kg/m ³	1263
Vapour density at boiling point	kg/m ³	5.7
Vapour pressure at:		
25°C	bar	1.30
50°C	bar	2.93
Critical temperature	°C	166.45
Critical pressure	bar	36.24
Critical density	kg/m ³	480
Latent heat of vaporisation at boiling point	kJ/kg	194.62
Thermal conductivity at 25°C		
Liquid	W/m.K	0.083
Vapour at 1.013 bar	W/m.K	0.011
Surface tension at 25°C	10 ⁻³ N/m	14.56
Viscosity at 25°C		
Liquid	10 ⁻³ Pa.s	0.286
Vapour at 1.013 bar	10 ⁻³ Pa.s	0.010
Specific heat at 25°C		
Liquid	kJ/(kg.K)	1.216
Vapour at 1.013 bar	kJ/(kg.K)	0.820
Cp/Cv ratio at 25°C at 1.013 bar		1.105
Flammability in air		Non-flammable
Flash point		None
Classification NF-EN 378 PED		A1 Group 2
Ozone Depletion Potential		0
GWP according to Regulation (EU) 2024/573 (F-Gas III)	(CO ₂ = 1)	3.88
GWP (AR4 / AR6)		4.5 / 3.88

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.



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