



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

The use and implementation of R-1233zd is governed by the European Regulation No 517/2014 .

**Find the Safety Data Sheets (SDS) directly on our website www.climalife.dehon.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		A1
ASHRAE		A1
Ozone Depletion Potential		0
GWP According to IPCC-AR4/IPCC-AR5		5/1

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.

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