SOLSTICE® 513A

Technical Information

Solstice 513A is a non-ozone depleting, low global warming potential (GWP) hydrofluoro-olefin (HFO)- based refrigerant developed to replace R-134a in positive displacement, direct expansion, medium-temperature commercial and industrial chillers, as well as flooded and/or centrifugal chillers. Solstice 513A is an excellent capacity and efficiency match for R-134a in new systems, as well as for retrofit of existing systems, offering an optimal balance of properties including high energy efficiency and lower GWP, which is better for the environment.



BENEFITS

- Reduced GWP: 56% reduction compared to R-134a[1]
- Excellent capacity and energy efficiency match to R-134a
- Close performance match to R-134a for retrofit and new systems
- Azeotrope with zero glide
- Safe and nonflammable (ASHRAE A1)
- Approved by major equipment and component manufacturers
- Compatible with existing R-134a equipment design/lubricants
- Oil change and seal replacement is necessary when retrofitting systems running on HCFC service blends.

APPLICATIONS

- Medium-temperature circuit of hybrid cascade systems
- Medium-temperature commercial and industrial DX refrigeration
- Water chillers, air conditioning, and heat pumps
- Ice rinks
- New equipment/retrofit of existing systems

SOLSTICE 513A PROPERTIES	
ASHRAE Number	R-513A
Composition	HFO R-1234yf/ R-134a
Weight %	56.0/44.0
Molecular Weight	108.4 g/mole (108.4 lb/lb mole)
Boiling Point at 1 atm (101.3 kPA)	-29.2 °C (-20.6 °F)
Critical Pressure	3766 kPa [abs] (546.2 psia)
Critical Temperature	96.5 °C (173.7 °F)
Liquid Density at 21.1 °C (70 °F)	1185.7 kg/m³ (74.0 lb/ft³)
Ozone Depletion Potential (CFC-11 = 1.0)	0
AR5 Global Warming Potential	573
ASHRAE Safety Classification	A1
Temperature Glide	0 °R (0 K)

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