

SOLSTICE[®] 513A

Technical Information

Solstice 513A is a non-ozone depleting, low global warming potential (GWP) hydrofluoroolefin (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-134a¹
- 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

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| 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/m ³ (74.0 lb/ft ³) |
| 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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