Opteon™ XP10
Refrigerant

Product Information

Opteon™ XP10 (R-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. Opteon™ XP10 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 environmental sustainability.

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

Benefits

- Low 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[(2)] A1)
- Approved by major equipment and component manufacturers
- Extensively field tested with no equipment/lubricant/seal changes (superheat adjustment may be required)
- Compatible with existing R-134a equipment design/lubricants
- Retrofit solution for HCFC service blends, such as R-401A, R-401B, and R-409A
  - Oil change and seal replacement is necessary when retrofitting systems running on HCFC service blends.

[(1)]According to Assessment Report 5 (AR5)

[(2)]American Society of Heating, Refrigerating, and Air-Conditioning Engineers

Opteon™ XP10 Properties

ASHRAE Number	R-513A
Composition	R-1234yf/R-134a
Weight %	56.0/44.0
Molecular Weight	108.4 g/mol
Normal Boiling Point[1]	-29.5 °C (-21.1 °F)
Critical Pressure	3647.8 kPa (529.1 psia)
Critical Temperature	94.9 °C (202.8 °F)
Liquid Density at 21.1 °C (70 °F)	1148.8 kg/m³ (71.7 lb/ft³)
Ozone Depletion Potential (CFC-11 = 1.0)	0
AR4 (AR5) GWP (CO2 = 1.0)	631 (573)
ASHRAE Safety Classification	A1
Temperature Glide	0 K (0 R)

1. Normal bubble point

Chemours™

LOW GWP ©

Conditions: 40.5 °C (105 °F) Cond, -6.7 °C (20 °F) Evap, 16.6 K (30 R) Superheat, 5.5 K (10 R) Subcool, 75% efficiency

	R-134a	R-513A
Relative Capacity	1.00	1.02
Relative COP	1.00	0.97
Relative Mass Flow	1.00	1.17
Suction Pressure kPa (psia)	228.2 (33.1)	255.8 (37.1)
Discharge Pressure kPa (psia)	1031.4 (149.6)	1088.0 (157.8)
Discharge Temperature °C (°F)	72.9 (163.3)	65.8 (150.6)

For refrigerant related support, contact our Tech2Tech Support Team **866-433-TECH** (8324), or email **tech2tech@chemours.com**

For more information on the Opteon™ family of refrigerants or other refrigerants from Chemours, visit opteon.com

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