



Opteon™ XP44

Refrigerant

Product Information

Opteon™ XP44 (R-452A) is a non-ozone depleting, low global warming potential (GWP) hydrofluoro-olefin (HFO)-based refrigerant to replace R-404A/R-507A in positive displacement, direct expansion, low- and medium-temperature commercial, industrial, and transport refrigeration applications. Opteon™ XP44 is suitable in new equipment, as well as for retrofit of existing systems, offering comparable energy efficiency with improved environmental properties, but without increased compressor discharge temperatures.

Applications

- Low- and medium-temperature transport DX refrigeration
 - Refrigerated trucks
 - Refrigerated vans
 - Reefer containers
- Low- and medium-temperature commercial and industrial DX refrigeration
- New equipment/retrofit of existing systems

Benefits

- Low GWP: 45% reduction compared to R-404A/R-507⁽¹⁾
- Matches discharge temperature of R-404A/R507
 - Critical for transport applications
- Matches mass flow rate of R-404A/R-507
 - No TXV change necessary

- Provides quick, easy, and low cost retrofit from R-404A/R-507A
- Safe and nonflammable (ASHRAE⁽²⁾ A1)
- Approved and adopted by major equipment manufacturers
- Compatible with existing equipment design/lubricants
- Can be topped off after leaks

⁽¹⁾According to Assessment Report 5 (AR5)

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

Opteon™ XP44 Properties

ASHRAE Number	R-452A
Composition	R-32/R-125/HFO-1234yf
Weight %	11.0/59.0/30.0
Molecular Weight	103.5 g/mole (103.5 lb/lb mole)
Boiling Point at 1 atm (101.3 kPa)	-47.0 °C (-52.6 °F)
Critical Pressure	4002 kPa [abs] (580.4 psia)
Critical Temperature	74.9 °C (166.8 °F)
Liquid Density at 21.1 °C (70 °F)	1148.8 kg/m ³ (71.7 lb/ft ³)
Ozone Depletion Potential (CFC-11 = 1.0)	0
AR5 Global Warming Potential	1945
ASHRAE Safety Classification	A1
Temperature Glide	-3 K (-5.4 °R)





For more information on the Opteon™ family of refrigerants, or other refrigerants products, visit opteon.com or call (800) 235-7882.

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Replaces: K-28828
C-10022 (1/18)

