

FORANE[®]

REFRIGERANTS

CAS No. 75-10-5 (HFC-32) / 354-33-6 (HFC-125) / 754-12-1 (HFO-1234yf)

Forane[®] 452A

Difluoromethane (HFC-32) / Pentafluoroethane (HFC-125)/ 2,3,3,3 Tetrafluoropropene (HFC-1234yf)

GENERAL DESCRIPTION

Forane[®] 452A is a lower GWP, A1 (non flammable) HFO refrigerant blend designed to replace R-404A or R-507A in commercial and transport refrigeration. Forane[®] 452A provides a very close matched discharge temperature, capacity, and efficiency to R-404A and R-507A. It can be used in new equipment or in retrofit applications.

PROPERTIES

Appearance	Colorless liquefied gas
Odor	Faint, ether-like odor
Molecular Mass (g/mole of blend)	103.5
ANSI/ASHRAE Standard 34 Safety Group Classification	A1
Ozone Depletion Potential (ODP) (CFC-11 = 1.0)	0
Global Warming Potential (GWP) ⁽¹⁾ (CO ₂ = 1.0)	2140

(1) GWP according to IPCC AR4. Values for 100-year time horizon.

TEMPERATURE

	50°F	70°F	105°F	115°F	130°F
Vapor Pressure, psia ⁽²⁾	111.8	154.7	258.4	296.1	360.6
Liquid Density, lb./ft ³ (2)	74.6	71.5	64.9	62.7	58.8

(2) Generated using NIST REFPROP Version 10.0

SPECIFICATIONS

(Meets AHRI 700 - 2019 Specifications)

	Maximum (unless otherwise indicated)
Difluoromethane (HFC-32), wt %	11 (9.3-12.7)
Pentafluoroethane (HFC-125) wt %	59 (57.2-60.8)
Tetrafluoropropene (HFC-1234yf), wt %	30 (29.0-30.1)
Air and Other Non-condensable Gases, vol %	1.5
Volatile Impurities, wt %	0.5
High Boiling Residue, vol %	0.01
Moisture (H ₂ O), ppm by wt	10
Acidity, ppm by wt (as HCl)	1.0
Chloride, no visible turbidity (indicates about 3 ppm)	Pass
Particulates/solids (visually clean to pass)	Pass

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BEFORE HANDLING THIS MATERIAL, READ AND UNDERSTAND THE SDS (SAFETY DATA SHEET) FOR ADDITIONAL INFORMATION ON PERSONAL PROTECTIVE EQUIPMENT AND FOR SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION.

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