

FORANE® 427A

CAS No. 75-10-5 (HFC-32) / 354-33-6 (HFC-125) / 420-46-2 (HFC-143a) / 811-97-2 (HFC-134a)

Difluoromethane (HFC-32) / Pentafluoroethane (HFC-125) / 1,1,1-Trifluoroethane (HFC-143a) / 1,1,1,2-Tetrafluoroethane (HFC-134a)

GENERAL DESCRIPTION

Forane® 427A is a blend of HFC components with zero ozone depletion potential. It is designed as an HFC refrigerant retrofit for R22 applications such as retail food refrigeration, industrial process air conditioning, chillers, household refrigerators and freezers, residential and light commercial air conditioning and heat pumps, and air conditioning for buses and passenger trains.

SPECIFICATIONS

(Meets AHRI 700-2017 Specifications)

	Maximum (unless otherwise indicated)	Tolerance
Difluoromethane (HFC-32), wt %	15.0 (nominal)	± 2.0 %
Pentafluoroethane (HFC-125), wt %	25.0 (nominal)	± 2.0 %
1,1,1-Trifluoroethane (HFC-143a), wt %	10.0 (nominal)	± 2.0 %
1,1,1,2-Tetrafluoroethane (HFC-134a), wt %	50.0 (nominal)	± 2.0 %
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, visually clean to pass	Pass	

PROPERTIES

Appearance	Colorless liquefied gas
Odor	Faint, ether-like odor
Molecular Mass (g/mole of blend)	90.4
Bubble Point at 1 atm	-45.4°F / -43.0°C
Dew Point at 1 atm	-33.3°F / -36.3°C
Flammable Limits (LFL, UFL), vol % (1 atm, 25°C)	NA / NA
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)	2,025

(1) GWP according to IPCC AR5. Values for 100-year time horizon

TEMPERATURE

	50°F	70°F	105°F	115°F	130°F
Vapor Pressure, psia ⁽²⁾	91.1	128.4	220.1	253.6	311.2
Liquid Density, lb./ft ³ (2)	74.3	71.5	65.9	64.1	61.1

(2) Generated using NIST REFPROP Version 9.1

Forane® Customer Service: 1-800-245-5858

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