

HFC-134a

Non-flammable,
non-ozone depleting
replacement for R-12.

Overview

Daikin HFC-134a is characterized by low toxicity, and excellent thermal stability. Mainly used as a refrigerant in applications that include automotive air conditioning, commercial air conditioning and refrigeration, domestic appliances and as a retrofit product for existing R-12 systems. Additionally, HFC-134a is used as a plastics and foam blowing agent, propellant, and medical propellant.

HFC-134a falls under US EPA SNAP and is currently scheduled as no longer acceptable for certain end uses in the U.S. for new equipment; such as Automotive. HFC-134a is unrestricted for service and maintenance purposes. Please refer to US EPA SNAP for most up to date rulings and decisions (<https://www.epa.gov/snap>).

	HFC-134a	CFC-12
Chemical Name	1,1,1,2-Tetrafluoroethane	Dichlorodifluoromethane
Chemical Formula	CH ₂ FCF ₃	CCl ₂ F ₂
Liquid Density (at 77°F)	75.3 lbm/ft ³	81.8 lbm/ft ³
Vapor Density (at 77°F)	2.0 lbm/ft ³	2.3 lbm/ft ³
Boiling Point (at 1atm)	-14.9°F	-21.6°F
Critical Temperature	213.9°F	233.6°F
Critical Pressure	588.8 psi	599.9 psi
Saturated Vapor Pressure (at 77°F)	95.5 psi	94.4 psi
Ozone Depletion Potential (ODP)*	0	1
Global Warming Potential (GWP)**	1430 / 1300	10900 / 10200
ASHRAE Classification Refrigerant Type	Class A1	Class A1
Appearance	Colorless	Colorless
Flammability	Nonflammable	Nonflammable

* Montreal Protocol reporting values

** IPCC Fourth Assessment Report / Fifth Assessment Report

Pressure Temperature Chart

Temp (°F)	R-134a	R-12
	Bubble/Dew Pressure (psig)	Bubble/Dew Pressure (psig)
-40	-7.3	-5.4
-35	-6.1	-4.1
-30	-4.8	-2.7
-25	-3.4	-1.2
-20	-1.8	0.5
-15	0.0	2.4
-10	1.9	4.5
-5	4.1	6.7
0	6.5	9.1
5	9.1	11.7
10	11.9	14.6
15	15.0	17.7
20	18.4	21.0
25	22.1	24.6
30	26.1	28.4
35	30.4	32.5
40	35.0	36.9
45	40.1	41.6
50	45.4	46.6
55	51.2	51.9
60	57.4	57.6
65	64.0	63.7
70	71.1	70.1
75	78.7	76.8
80	86.7	84.0
85	95.2	91.6
90	104.3	99.6
95	114.0	108.0
100	124.2	116.9
105	135.0	126.3
110	146.4	136.1
115	158.4	146.4
120	171.2	157.3
125	184.6	168.6
130	198.7	180.5
135	213.6	193.0
140	229.2	206.0
145	245.7	219.7
150	262.9	233.9

Handling Method and Safety Information

HFC-134a is a liquefied high-pressure gas. Please refer to the Safety Data Sheet (SDS) before use.

Packaging Specifications

HFC-134a is available in 30lb disposable and 125lb returnable containers.

Compatibility Information

HFC-134a is compatible with most existing HFC system components. Specifically, existing polyol ester lubricants (POE), filter dryers, gaskets, elastomers, and plastics. Please contact the component manufacturers for specific recommendations.

Additional Information

Additional field trial, retrofit guides and technical data are available upon request and at www.daikin-america.com.