

R-410A

HFC Blend Refrigerant

R-410A is a blend refrigerant developed as a substitute for HCFC-22. It is a mixture of HFC-32 and HFC-125, and is a pseudo-azeotropic refrigerant. It requires liquid filling to prevent change in composition.

Its level of pressure is approximately 1.6 times higher than that of HCFC-22, achieving excellent heat pump performance. It is highly compatible with ester oil and ether oil (It is not compatible with mineral oils like naphthenic oil etc. which is normally used with HCFC-22). Its moisture solubility is slightly higher than that of HCFC-22.

It is mainly used as a refrigerant for air-conditioning systems (room air-conditioners and packaged air conditioners). It is also used as a refrigerant for freezing and refrigeration systems.

General Properties

	R-410A	[Reference] HCFC-22
Components	HFC-32/125	–
Blend Ratio	50/50	–
Boiling Point (°C)	-51.5	-40.8
Saturated Vapor Pressure (MPa, 25°C)	1.65	1.04
Range of Flammability (vol% in air)	Non-flammable	Non-flammable
Ozone Depletion Potential (ODP)*¹	0	0.055
Global Warming Potential (GWP)*² ()*³	2090 (1730)	1810 (1500)

*1 Based on December 1991 announcement by AFEAS.

*2 Integrated time of 100 years based on IPCC 4th Report 2007.

*3 Integrated time of 100 years based on IPCC 2nd Report 1995.

Handling Method and Safety Information

R-410A is liquefied high-pressure gas. Read the Material Safety Data Sheet (MSDS) before use. Dangerous or hazardous reactions do not take place under normal conditions.

Packaging Specifications

High-pressure gas rental cylinder: 10 kg, 20 kg, 100 kg, 1 ton, etc.

Non-refillable cylinder: 10 kg