

REFRIGERANT FACT SHEET R449A

Gas2GO[®]

CHARACTERISTICS

R449A is a HFO blend refrigerant suitable for use in low and medium temperature applications.

R449A was developed as a lower GWP alternative to R404A, R507, R407F and R22.

R449A has a slightly higher GWP than R448A.

PERFORMANCE

- As a retrofit replacement for R404A in supermarket applications, R449A delivers a reduction in power consumption and a significant reduction in carbon footprint in low and medium temperature applications
- R449A is a good alternative to R404A in both low and medium temperature supermarket applications as it has a higher capacity and 5 – 10% better energy efficiency than R404A
- Polyolester oil is required with R449A to ensure adequate oil return
- Existing TX valves may operate satisfactorily with R449A, superheat adjustment will be required. Where practical an electronic expansion device should be considered

APPLICATIONS



Low Temperature Refrigeration

- Cold storage



Medium Temperature Refrigeration

- Commercial

PHYSICAL ATTRIBUTES



- **ODP:** 0
- **GWP:** 1397
- **Class/ Type:** Zeotropic blend (A1)
- **Refrigerant Kind:** HFC Blend
- **Oil Type:** Polyolester oil (POE)
- **Glide:** ~4K

FEATURES

- Approximately 65% reduction in GWP compared with R404A
- Higher critical pressure when compared to R404A at 43 bar(a)
- Liquid charge

THERMODYNAMIC PERFORMANCE

- Similar cooling capacity to R404A
- Increases energy efficiency saving of up to 10%
- Must be charged in the liquid phase to prevent fractionation
- Compatible with existing R404A lubricants and system design
- Suitable for new and existing equipment
- Meets or improves capacity over R22 and R404A with better COP

PRODUCT PART NUMBERS

Kirby & Beijer Ref do not currently stock this refrigerant, R448A is a suitable alternative.

For safety, handling and storage guidelines please refer to the MSDS (available on Chemwatch).

This information is believed to be accurate and reliable, but is provided as a guide only. Beijer Ref Holdings Australia Pty Ltd (T/A Beijer Ref Support) accepts no responsibility and the end user assumes all risks and liability for the use of this information.

PRESSURE TEMPERATURE CHART

Liquid (bubble) Temp C°	Vapour (dew) Temp C°	Pressure (kPa)
-44	-19	10
-42	-10	21
-40	0	33
-38	10	46
-36	21	59
-34	33	74
-32	46	89
-30	59	106
-28	74	123
-26	90	142
-24	107	162
-22	125	184
-20	144	206
-18	164	230
-16	186	255
-14	209	282
-12	233	310
-10	259	340
-8	286	372
-6	315	405
-4	346	440
-2	378	476
0	412	515
2	447	555
4	485	597
6	524	641
8	586	688
10	609	736
12	655	787
14	703	840
16	753	895
18	805	953
20	860	1013
22	918	1075
24	977	1140
26	1040	1208
28	1105	1278
30	1173	1351
32	1244	1427
34	1318	1506
36	1395	1587
38	1475	1672
40	1558	1760
42	1645	1851
44	1735	1945
46	1828	2043
48	1926	2144
50	2027	2248

PHYSICAL PROPERTIES

Class/ Type	Zeotropic Blend
Formula	25.7% R134a/ 25.3% R1234yf/ 24.7% R125/ 24.3% R32
Kind	HFC Blend
Appearance	Colourless
ODP	0
GWP	1397
Ashrae Std. 34 Safety Class	A1

Units	AHRI Specification
Molecular Weight	99.1 g/mol
Boiling Point	- 46°C
Critical Temperature	81.5°C
Critical Pressure	43.0 bar
Critical Density	510.45 kg/m ³
Critical Volume	0.0020 m ³ /kg

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