

REFRIGERANT FACT SHEET R450A

Gas2GO®

CHARACTERISTICS

R450A is a non-flammable, zeotropic HFO blend refrigerant developed as a low GWP alternative to R134a.

R450A is an energy efficient alternative when used in medium temperature applications.

Lowest GWP (547) in class with no flammability.

PERFORMANCE

- Suitable low GWP retrofit replacement for R134a in DX supermarket refrigeration applications, R450A delivers a comparable carbon footprint in medium temperature applications
- Polyolester oil is recommended with R450A to ensure adequate oil return
- The same POE oil as R134a can be used with minimal adjustment to TX valves
- The small glide of R450A is of no effect in most DX systems
- Slightly reduced capacity compared to R134a
- Highly efficient when used in systems designed for R450A

APPLICATIONS



Medium Temperature Refrigeration

- Commercial
- Domestic



Air Conditioning

- Industrial
- Commercial
- Automotive



Water Chillers

PHYSICAL ATTRIBUTES



- **ODP:** 0
- **GWP:** 547
- **Class/Type:** Zeotropic blend (A1)
- **Refrigerant Kind:** HFC/ HFO Blend
- **Oil type:** Polyolester Oil (POE)
- **Glide:** 0.4K

FEATURES

- 58% reduction of GWP compared with R134a
- Improved energy efficiency compared to R134a
- Similar performance to R134a, with slightly less capacity
- Suitable for retrofit or new installations
- Approved by most OEM manufacturers (check guidelines)
- Liquid or vapour charge

THERMODYNAMIC PERFORMANCE

- Shows 87% capacity with similar efficiency, compared with R134a
- Small glide can be easily addressed during system design
- Lower discharge temperature than R134a

PRODUCT PART NUMBERS

- **H450060** 60kg Cylinder.

For safety, handling and storage information 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

C°	R450A Dew (kPa)	R450A Bubble (kPa)
-44	-65	-66
-42	-61	-62
-40	-56	-57
-38	-51	-53
-36	-46	-47
-34	-40	-42
-32	-34	-36
-30	-27	-29
-28	-19	-22
-26	-11	-14
-24	-3	-6
-22	6	4
-20	16	13
-18	26	23
-16	37	34
-14	50	46
-12	62	59
-10	76	72
-8	91	86
-6	106	101
-4	123	117
-2	140	134
0	159	152
2	178	171
4	196	191
6	220	213
8	242	235
10	268	258
12	291	283
14	318	309
16	345	337
18	375	385
20	406	396
22	437	427
24	471	460
26	507	495
28	543	531
30	582	569
32	622	609
34	664	650
36	706	693
38	753	738
40	800	785
42	850	834
44	901	885
46	955	938
48	1010	993
50	1068	1050

PHYSICAL PROPERTIES

Class/ Type	Zeotropic Blend
Formula	58% R1234ze/ 42%R134a
Kind	HFO/ HFC
Appearance	Colourless
ODP	0
GWP	547
ASHRAE Std. 34 Safety class	A1

Units	Physical Properties
Molecular Weight	108.6 kg/mol
Boiling Point	- 23.1
Critical Temperature	104.4°C
Critical Pressure	38.2 bar
Critical Volume	0.002032 m ³ / kg
Critical Density	492.2 kg/m ³
Vapour Density at Boiling Point	5.443 kg/m ³
Liquid Density at 0°C	1257.7 kg/m ³
Liquid Density at 25°C	1175.1 kg/m ³
Vapour Density at 25°C	29.6 kJ/kg °K
Vapour Pressure at 25°C	584.4 kPa
Liquid Viscosity at 25°C	194.2 µPa-sec
Vapour Viscosity	12.2 µPa-sec

OUR SERVICES



Gas2Go®
Refrigerant Management



Gas2Go®
Gas Doctor Analysis



Gas2Find™
Leak Detection



Gas2Go® Reclaim &
Gas2Go® Pumpdown

YOUR LOCAL HVAC&R REFRIGERANT SPECIALIST



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Quality Control
to ISO9001



Access to
Nationwide
Technical Support



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