REFRIGERANT FACT SHEET
R1233zd

CHARACTERISTICS

R1233zd is a single component, non-flammable ultra-low GWP refrigerant.

R1233zd is a long term refrigerant solution for R123. Normally used in low or negative pressure centrifugal chillers.

PERFORMANCE

- Replacement for R123 in low-pressure centrifugal chillers
- R1233zd is suitable for new equipment not suitable for retrofit applications
- For optimal performance, it is recommended to use valves and fittings with plastic sealing washers. Avoid using fibre washers as leaks may occur
- R1233zd is a close performance match to R123

APPLICATIONS

Water Chillers

- Low pressure

PHYSICAL ATTRIBUTES

- **ODP:** 0
- **GWP:** 1
- **Class/Type:** Molecule (A1)
- **Refrigerant Kind:** HFO
- **Oil Type:** Mineral Oil
- **Glide:** N/A

FEATURES

- Non-flammable
- Ultra-low GWP replacement for R123
- Low pressure
- Innovative single component HFO

THERMODYNAMIC PERFORMANCE

Better capacity and improved efficiency to R123

PRODUCT PART NUMBERS

Availability to be confirmed, contact your Kirby & Beijer Ref representative for more information.

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

Temp C°	Pressure (kPa)
-40	-95.7
-38	-94.9
-36	-94.1
-34	-93.1
-32	-92.1
-30	-90.9
-28	-89.7
-26	-88.3
-24	-86.7
-22	-85.0
-20	-83.2
-18	-81.2
-16	-78.9
-14	-76.6
-12	-74
-10	-71.2
-8	-68.1
-6	-64.9
-4	-61.3
-2	-57.5
0	-53.4
2	-49.0
4	-44.3
6	-39.3
8	-33.9
10	-28.1
12	-22.0
14	-15.5
16	-8.5
18	-1.2
20	6.6
22	14.9
24	23.7
26	33.1
28	42.8
30	53.3
32	64.2
34	75.7
36	87.9
38	100.7
40	114.1
42	128.2
44	143.0
46	158.6
48	174.9
50	191.9

PHYSICAL PROPERTIES

Class/ Type	Molecule
Formula	100% R1233zd
Kind	HFO
Appearance	Colourless
ODP	0
GWP	1
ASHRAE Std. 34 Safety Class	A1

Units	AHRI Specification
Molecular Weight	130.5 g/mol
Boiling Point	18.32°C
Triple Point	-78°C
Critical Temperature	165.6°C
Critical Pressure	35.71 bar
Critical Volume	0.0021 m^3/ kg
Critical Density	476.31 kg/m^3
Vapour Density at Boiling Point	5.71 kg/m^3
Liquid Density at 0°C	1326.79 kg/m^3
Vapour Pressure at 25°C	498.6 kPa
Liquid Viscosity at 25°C	155.5 µPa-sec
Vapour Viscosity	12.3 µPa-sec

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