

REFRIGERANT FACT SHEET R1234ze

Gas2GO®

CHARACTERISTICS

R1234ze is a HFO refrigerant designed as a low GWP alternative to R134a.

Care must be taken during use as R1234ze is classified as A2L (low flammability).

PERFORMANCE

- R1234ze is a suitable alternative for R134a
- Due to the flammability, it is essential to check equipment compatibility
- R1234ze is not suitable for use in retrofit applications
- R1234ze should only be used in systems specifically designed for R1234ze
- Compressors must be charged with modified polyolester oils (check OEM guidelines)

APPLICATIONS



Medium Temperature Refrigeration

- Commercial



Air Conditioning

- Industrial
- Commercial



Water Chillers

PHYSICAL ATTRIBUTES



- **ODP:** 0
- **GWP:** <1
- **Class/ Type:** Unsaturated Organic Compound (A2L)
- **Refrigerant Kind:** HFO
- **Oil Type:** Polyolester oil (POE)
- **Glide:** N/A

FEATURES

- With a GWP of <1 R1234ze offers a significantly reduced carbon footprint of systems over the total lifetime
- Cost effective solution
- Low flammability – may require additional safety measures during use and service
- Non-toxic
- Liquid or vapour charge

THERMODYNAMIC PERFORMANCE

- R1234ze has a similar cooling performance to R134a
- Comparable energy efficiency to R134a
- Suited to all climates
- Approximately 20% less refrigeration capacity compared to R134a but with significantly lower pressures

PRODUCT PART NUMBERS

Availability to be confirmed, contact your Kirby & Bejler 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. Bejler Ref Holdings Australia Pty Ltd (T/A Bejler 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 | 37 |
| -35 | 48 |
| -30 | 61 |
| -25 | 77 |
| -20 | 97 |
| -15 | 120 |
| -10 | 147 |
| -5 | 179 |
| 0 | 216 |
| 5 | 259 |
| 10 | 308 |
| 15 | 364 |
| 20 | 427 |
| 25 | 499 |
| 30 | 578 |
| 35 | 668 |
| 40 | 767 |
| 45 | 876 |
| 50 | 997 |
| 55 | 1131 |
| 60 | 1277 |
| 65 | 1437 |
| 70 | 1611 |

PHYSICAL PROPERTIES

| Class/ Type | Unsaturated Organic Compound |
|-----------------------------|------------------------------|
| Formula | 100% R1234ze |
| Kind | HFO |
| Appearance | Colourless |
| ODP | 0 |
| GWP | <1 |
| ASHRAE Std. 34 Safety Class | A2L |

| Units | Physical Properties |
|---------------------------------|-----------------------------|
| Molecular Weight | 114 kg/mol |
| Boiling Point | - 19°C |
| Triple Point | -104.53°C |
| Critical Temperature | 109.4°C |
| Critical Pressure | 36.4 bar |
| Critical Volume | 0.00204 m ³ / kg |
| Critical Density | 489 kg/m ³ |
| Vapour Density at Boiling Point | 5.71 kg/m ³ |
| Liquid Density at 0°C | 1293 kg/m ³ |
| Vapour Pressure at 25°C | 498.6 kPa |
| Liquid Viscosity at 25°C | 1994.4 µPa-sec |
| Vapour Viscosity | 12.2 µPa-sec |

OUR SERVICES



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Gas2Go®
Gas Doctor Analysis



Gas2Find™
Leak Detection



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