R410A Properties and Applications

R410A is a zeotropic HFC blend of R125 and R32. In Australia R410A is a popular product for commercial and residential air conditioning systems as an alternative to R22. R410A exhibits higher pressures than R22 so is used in new equipment rather than as a retrofit gas.

Physical Properties

- ASHRAE A1 safety classification
- Non Flammable & safe to use
- Zero ODP
- GWP of 1725 (IPCC assessment report 2)
- Molecular weight is 72.6
- Boiling point at 1 ATM is –51.5 °C
- Critical Temperature is 71.8 °C

Applications

- Domestic and commercial air-conditioning

Usage Instructions

- Higher pressure - needs specific equipment
- Compatible with POE lubricants
- Charging must be done in liquid phase
- R410A cannot be discharged to atmosphere. Always recover refrigerants into an A-Gas reclaim cylinder

Pack Sizes

- 5KG cylinder
- 10KG cylinder
- 18KG cylinder
- 60KG cylinder

PT Chart

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<th>Temp °C</th>
<th>Bubble Pressure KPa</th>
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**GUIDE TO REFRIGERANT REPLACEMENTS**

**PREVIOUS REFRIGERANT**

- R502 CFC
- R402A HCFC
- R403B HCFC
- R404A HCFC
- R411B HCFC

**APPLICATION**
- Low Temp Refrigeration

**CFC/HCFC**

**REFRIGERANT REPLACEMENT (ZERO ODP)**

- R422A ISCEON® M079
- R426A RS32
- R426A ISCEON® M089

- OIL Mineral Alkylbenzene Polyol Ester
- OIL Mineral Alkylbenzene Polyol Ester

**APPLICATION**
- Low Temp Refrigeration
- Med Temp Refrigeration

**HFC**

*Not suitable for systems with capillary tube, expansion valve only.*

**REFRIGERANT REPLACEMENT (ZERO ODP)**

- R438A ISCEON® M099
- R442B RS94

- OIL Mineral Alkylbenzene Polyol Ester
- OIL Mineral Alkylbenzene Polyol Ester

**APPLICATION**
- Low Temp Refrigeration
- Med Temp Refrigeration

**HFC**

**LONG-TERM REPLACEMENT**

- R290 Propane
- R1270 Propylene

- OIL Mineral
- OIL Polyol Ester

**APPLICATION**
- Low Temp Refrigeration
- Med Temp Refrigeration

**HFC**

There is no single product that can replace R22 in all applications. If you need help with any particular application, please contact us.

Replacement refrigerants in most cases do not require a change of lubricant type, however manufacturers’ guidance as well as good engineering practice should be followed.

All information supplied is for guide purposes only.

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