Freon™ One Shot-C Refrigerant (R-422C)

Product Information

Freon™ One Shot-C (R-422C) is a non-ozone depleting A1 refrigerant that can be used as a direct replacement into existing systems that are still operating with R-502, R-404A/507, or R-22. Freon™ One Shot-C is compatible with traditional and new lubricants; in most cases, no change of lubricant is required.

Applications
- R-502 low and medium temperature refrigeration
- R-407A/507 low and medium temperature refrigeration
- R-22 low and medium temperature refrigeration

Benefits
- EPA SNAP listed
- Designed for systems utilizing direct expansion devices
- No line set changes
- Compatible with AB, MO, and POE lubricants
- Can use R-502/404A TEV and power element

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>ASHRAE Number</td>
<td>R-422C</td>
</tr>
<tr>
<td>Composition</td>
<td>R-125/R-134a/R-600a</td>
</tr>
<tr>
<td>Weight %</td>
<td>82/15/3</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>113.4 g/mole (113.4 lb/lb mole)</td>
</tr>
<tr>
<td>Boiling Point at 1 atm (101.3 kPa)</td>
<td>-45.95 °C (-50.71 °F)</td>
</tr>
<tr>
<td>Critical Pressure</td>
<td>3776.26 kPa (abs) (547.70 psia)</td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>73.07 °C (163.53 °F)</td>
</tr>
<tr>
<td>Liquid Density at 21.1 °C (70 °F)</td>
<td>1163.95 kg/m³ (72.66 lb/ft³)</td>
</tr>
<tr>
<td>Ozone Depletion Potential (CFC-11 = 1.0)</td>
<td>0</td>
</tr>
<tr>
<td>AR5 Global Warming Potential</td>
<td>2794</td>
</tr>
<tr>
<td>ASHRAE Safety Classification</td>
<td>A1</td>
</tr>
<tr>
<td>Temperature Glide</td>
<td>-2 K (-4.5 °R)</td>
</tr>
</tbody>
</table>

Conversion Recommendations and Guidelines

System must be designed for use with R-502, R-404A/507, or R-22—in sound operating condition and free of leaks. Freon™ One Shot-C is designed for use in systems utilizing direct expansion metering (e.g., TXV, fixed orifice, cap tube). Change from CFC or HCFC to HFC refrigerants may cause a retraction in O-rings and elastomers. Replace these items after recovery of the original refrigerant.

1. **Record Pre-Conversion System Data**
   Prior to conversion, operating conditions should be monitored and recorded for future reference.

2. **Recover Original Refrigerant**
   In accordance with EPA guidelines, 100% of the refrigerant must be recovered from the system.

3. **Perform Oil Analysis**
   Test system oil for acidity, water, and solids. If detected, perform a complete system oil change using OEM specified oil and charge size.

4. **Install New Filter Drier and Oil Filter**
   Oil analysis will inform which filter drier type should be used. Systems with coalescent oil separators and/or compressor oil filters need to be changed as well.

5. **Leak Check System**
   Pressure test system with dry nitrogen. DO NOT exceed system’s design pressure.

6. **Evacuate System**
   Pull a minimum 500-micron vacuum to remove non-condensables and moisture.
7. **Charge System**
   Turn over cylinder, and charge system with LIQUID ONLY. Refrigerant can be added directly into the receiver tank or high-pressure side of the system with compressor off. Charge ratios will vary based on system design and application. Initial charge should be 95% of original refrigerant’s weight.

8. **Run System**
   Check pressure, subcooling, and superheat temperatures. If additional refrigerant is needed, add in 5% increments. DO NOT exceed 115% of the original charge.

9. **Properly Label System**
   Avoid mixing refrigerants by properly labelling the system.

10. **Post-Conversion Leak Check**
    Perform a thorough leak check as system operation begins post-conversion.

11. **Record Post-Conversion System Data**
    Monitor and evaluate system performance. Record data. This information should be compared to the pre-conversion data.

For more information on Freon™ refrigerants, visit freon.com

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