Freon™ 407C

Refrigerant (R-407C)

Frequently Asked Questions

What is R-407C?

R-407C is a hydrofluorocarbon (HFC) alternative for R-22 in positive displacement air-conditioning (AC) equipment. It is currently being used in commercial and light commercial AC units using air cooled direct expansion (DX) chillers.

R-407C can also be used in many medium-temperature refrigeration systems that formerly used R-22.

R-407C can also be used to replace R-502 in new and existing medium-temperature applications with evaporator temperatures above 20 °F (-6.7 °C).

Where can I buy R-407C?

Chemours is a leading producer of R-407C under the brand name of Freon™ 407C. All Chemours distributors have access to the product. You should talk with your distributor, so he/she knows to stock Freon™ 407C. You will also want to keep Freon™ 407C on hand to ensure that you are prepared to handle customer requests when they come in.

Is R-407C a blend refrigerant?

Yes. It is a blend of HFC-32, HFC-125, and HFC-134a (23/25/52 wt%). Freon™ 407C can be topped off after a leak, multiple times, with minimal impact on system performance.

How should I charge R-407C?

For optimum performance, R-407C should be removed from the cylinder as a liquid. The cylinder is marked with an arrow showing the proper position for removing liquid.

What type of lubricant should be used with R-407C?

A high-quality polyol ester (POE) lubricant is recommended. Always consult the compressor or system OEM.

Do I need different service tools to work on R-407C systems?

No. Because the chemical and physical properties of R-407C are very similar to R-22, you can use existing service tools. However, take care to avoid cross-contamination of different types of refrigerants and lubricants.

How will system operation for R-407C be different than R-22?

Refrigerant Properties	Freon™ R-407C vs. R-22
Discharge Pressure	+15 to +25 psi
Cooling Capacity	–2 to +2%
Discharge Temperature	–10 to –15 °F (-23.3 to -26.1 °C)
Energy Efficiency	Depends on equipment design; but, will be very similar to R-22

Will R-407C systems have different components than R-22 systems?

Although the operating characteristics of R-407C are very similar to R-22, components in new systems may be slightly modified to obtain optimum performance. Components in existing R-22 systems are most likely compatible with R-407C. You should always consult the equipment OEM before any retrofit.

Can R-407C be used to retrofit existing R-22 AC equipment?

Yes. Because the operating characteristics are nearly the same as R-22, existing AC equipment can be retrofit to R-407C. Always consult the OEM for retrofit guidelines.

Can R-407C be used to retrofit existing R-22 refrigeration equipment?

Yes. Freon™ 407C can be used in many medium-temperature refrigeration systems that formerly used R-22. Always consult the system OEM.

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Can R-407C be used to retrofit existing R-502 equipment?

Yes. The operating characteristics of R-407C are similar to R-502, with the added benefit of higher energy efficiency. However, some control components may need to be replaced or adjusted to achieve optimum performance. Always consult the OEM for retrofit guidelines.

How will system operation for R-407C be different than R-502?

Refrigerant Properties	Freon™ R-407C vs. R-502
Discharge Pressure	−5 to −10 psi
Cooling Capacity	−5%
Discharge Temperature	+20 to +30 °F (-6.7 to -1.1 °C)
Energy Efficiency	Depends on equipment design; but, will be about 5% higher than R-502

Will R-407C systems have different components than R-502 systems?

Components in new systems may be slightly modified to obtain optimum performance with R-407C. Components in existing R-502 systems are most likely compatible with R-407C; but, some components, such as pressure regulators and expansion devices, may have to be replaced and/or adjusted. You should always consult the equipment OEM before any retrofit

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

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