

Residential Air Conditioning and the Phaseout of HCFC-22

What You Need to Know



What Is the HCFC Phaseout?

Under the U.S. Clean Air Act and the *Montreal Protocol on Substances that Deplete the Ozone Layer*, the United States is phasing out the production and import of hydrochlorofluorocarbons (HCFCs) in order to protect the stratospheric ozone layer. By phasing out the production of ozone-depleting substances like HCFCs, we are reducing the risk of skin cancer caused by exposure to UV radiation. In addition, many of these ozone-depleting substances, as well as their substitutes, are greenhouse gases that contribute to climate change.

No Immediate Change Is Required

HCFC-22, commonly referred to as R-22, is used as a refrigerant in many applications, including residential air conditioning (AC) systems. Starting on January 1, 2020, U.S. production and import of HCFC-22 will end, but you may continue to use HCFC-22 in your existing system for as long as necessary. HCFC-22 that is recovered and reclaimed, along with HCFC-22 produced prior to 2020, will help meet the needs of owners of existing HCFC-22 systems.

How can I find out if my home air conditioner contains HCFC-22?

Most air conditioners have a nameplate on the unit that identifies the refrigerant it contains and other information, such as safety certifications and electrical ratings.



Planning for the Future Is Important

Even though there is no immediate need for change, HCFC-22 supply will decline over the next few years, and prices may rise. By asking your service technician to check for leaks and perform preventive maintenance, you can help keep your refrigerant emissions down and reduce the need to purchase additional HCFC-22. Air conditioning equipment generally runs most efficiently on the type of refrigerant it was designed for, but when the time does come to replace or retrofit your system, there are many non-ozone-depleting alternatives available.

What Alternatives Can Be Used Instead of HCFC-22?

Many non-ozone-depleting alternatives to HCFC-22 are available. See the table on the next page for some of the most common non-ozone-depleting alternatives that are listed as acceptable under EPA's Significant New Alternatives Policy (SNAP) Program. Some of these alternatives are for new residential AC systems, while others are listed for use in both new and retrofitted residential AC systems. A full list of acceptable alternatives under SNAP is available at www.epa.gov/snap/substitutes-refrigeration-and-air-conditioning.

Acceptable Non-Ozone-Depleting Alternatives to HCFC-22 for Residential AC

Chemical	GWP	Ozone Depleting?	Retrofit	New
R-134a	1,430	No		X
R-407C	1,770	No	X	X
R-410A	2,090	No		X
R-407A	2,110	No	X	X

GWP = Global Warming Potential. GWP is a measure of how much a given mass of greenhouse gas is estimated to contribute to global warming relative to the same mass of carbon dioxide.

If your service technician is retrofitting a system, be sure he or she recovers any HCFC-22 still in your AC, follows the manufacturer's suggested handling and installation guidelines for that particular alternative, and explains how the conversion to a different refrigerant might affect your system's performance and energy use.

Are There Other Refrigerant Regulations Affecting Residential AC?

Yes. Under Section 608 of the Clean Air Act and EPA's regulations, it is illegal for anyone servicing, repairing, maintaining or disposing of AC equipment to intentionally vent the refrigerant. There are additional handling, recovery, and sales requirements that apply to certain refrigerants.

For Further Information

- Phaseout of Ozone-Depleting Substances: www.epa.gov/ods-phaseout/phaseout-class-ii-ozone-depleting-substances
- Section 608 of the Clean Air Act: Stationary Refrigeration and Air Conditioning: www.epa.gov/section608

Other EPA Resources for Homeowners

- Frequently Asked Questions About Repairing or Replacing Your Home Air Conditioner: www.epa.gov/ods-phaseout/purchasing-and-repairing-home-air-conditioners-or-heat-pumps
- Homeowners Frequently Asked Questions: www.epa.gov/ods-phaseout/homeowners-and-consumers-frequently-asked-questions
- Indoor Air Quality in Homes: www.epa.gov/indoor-air-quality-iaq/protect-indoor-air-quality-your-home
- ENERGY STAR® Energy Savings at Home: www.energystar.gov/campaign/home

