



Shaping Tomorrow's
Built Environment Today

REFRIGERANTS AND THEIR RESPONSIBLE USE

THE ISSUE

Choosing a refrigerant for a given HVAC&R application has become increasingly complex due to their direct and indirect environmental impacts, performance, cost-effectiveness and safety for employees and the public. Following the implementation of the Kigali Amendment to the Montreal Protocol in 2019, the use of lower global warming potential (GWP) refrigerants began to replace today's high GWP refrigerants. Many of the lower GWP refrigerants are mildly flammable, which required the updating of common codes and standards.

ASHRAE'S ROLE

With its technical expertise, ASHRAE plays a key role in guiding the selection and analysis of new refrigerants, and the potential environmental and societal consequences of their use. ASHRAE contributed to successfully phasing out the use of ozone depleting refrigerants and is already contributing to reducing the use of high GWP refrigerants. ASHRAE develops voluntary standards and guidelines governing the classification, application, and use of refrigerants, which are referenced by various codes and regulations, globally.

As lower GWP refrigerants become prevalent, ASHRAE commits to ensure their safe classification and application in residential, commercial and industrial uses as prescribed by the Standard 34 – 2019, *Designation and Classification of Refrigerants* and the ASHRAE Standard 15 – 2019, *Safety Standard for Refrigeration Systems*. Significant updates to these standards were based on a \$5.2 million research program, with contributions from DOE (\$3 million), ASHRAE (\$1.2 million) and AHRI (\$1 million), as part of ASHRAE's commitment to support climate change mitigation.

ASHRAE'S VIEW

ASHRAE supports the classification and use of refrigerants based on safety, performance and environmental impact. As the transition to more climate-friendly alternatives continues, ASHRAE supports reducing emissions from high GWP refrigerants through research, education, and improvements to design, installation, operation, maintenance, and decommissioning of equipment in accordance with applicable standards and policies.

ASHRAE supports the global phasedown of the production and consumption of high GWP refrigerants through policies such as legislation and regulation. ASHRAE also supports adoption of the latest standards and application of the latest policies in order to enable these new lower GWP refrigerants. ASHRAE encourages and supports ongoing efforts to develop new refrigerants and improve the application of existing refrigerants to meet these criteria.

Furthermore, used refrigerants should be safely recovered for reuse, recycle, reclamation or destruction during service or at the end of the equipment life. Refrigerant inventory and management programs should be implemented to closely track refrigerant use.