



Shaping Tomorrow's Global
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 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, lower global warming potential (GWP) refrigerants are beginning to replace high-GWP refrigerants. Many of the lower-GWP refrigerants are mildly flammable, which requires the updating of building codes and standards. Ultra-low-GWP refrigerants are also being used and considered for certain applications, and it is important to ensure these refrigerants are used safely, efficiently, and cost-effectively. Beyond known refrigerant environmental impacts, recent broad policy proposals related to health concerns of certain persistent, bioaccumulative, toxic (PBT) fluorinated chemicals could limit available refrigerants, depending on the scope of any per- and poly-fluorinated alkyl substances (PFAS chemicals) regulations.

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 high-GWP refrigerant use. ASHRAE develops voluntary technical 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 more prevalent, ASHRAE commits to their safe application in residential, commercial, and industrial uses as prescribed by Standard 34-2024, *Designation and Safety Classification of Refrigerants*, Standard 15-2024, *Safety Standard for Refrigeration Systems*, and the Standard 15.2-2024, *Safety Standard for Refrigeration Systems in Residential Applications*. Significant updates to these standards were made to address safe use of lower-GWP A2L refrigerants. ASHRAE, through research and its consensus-based process continues to pursue revisions to its standards that support the safe use of lower-GWP refrigerants.

ASHRAE's VIEW

ASHRAE encourages adoption of updated building codes and standards that enable safe use of lower-GWP refrigerants. 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, including minimization of leakage and accurate accounting and reporting in accordance with applicable standards and policies.

ASHRAE supports the global phasedown of the production and consumption of high-GWP refrigerants and encourages the adoption of the latest standards in order to enable use of lower-GWP refrigerants. ASHRAE continues to update its standards to reflect lower-GWP refrigerants and solutions.

Furthermore, used refrigerants should be safely recovered for reuse, recycle, reclamation, or

destruction during service or at the end of the equipment life. ASHRAE advocates for comprehensive technician training programs to ensure safe handling of mildly flammable refrigerants and compliance with updated standards. Refrigerant inventory and management programs should be implemented to closely track refrigerant use.