

End-of-life HFCs

When any piece of equipment reaches the end of its service life, it is good practice to attempt to recover all of the components for safe disposal or, better still, re-use. In the case of refrigeration equipment, the fluid in the system can be drained out and reprocessed to be used again. Recovery of the insulating gas in plastic foam insulation is more difficult but technically possible and, again, the gas may be re-used. These processes of recovery and recycling are sustainable and fluids that can be safely and conveniently removed and re-used represent the most sustainable options.

HFCs are intrinsically safe. They are, effectively, non-toxic. Most are not flammable and those that do burn have a narrow range of "combustion limits". This means that they can be made inert with non-combustible gases relatively easily. As a result, HFCs may be recovered from used equipment simply and without significant danger.

Other chemical refrigerants, such as hydrocarbons (for example propane), have much wider combustion limits and it is not practically possible to render them safe by "inerting" with non-combustible gas. This leaves destruction as the only viable end-of-life option. Thus use of a flammable refrigerant could seriously compromise sustainability.

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