



FOR IMMEDIATE RELEASE: September 2, 2016

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FACT SHEET

Protection of Stratospheric Ozone: Determination 31 for Significant New Alternatives Policy Program

Action Listing New Acceptable Substitutes

Under section 612 of the Clean Air Act, EPA reviews substitutes within a comparative risk framework. To arrive at determinations on the acceptability of substitutes, the Agency performs a cross-media analysis of risks to human health and the environment from the use of various substitutes in different industrial and consumer uses that have historically used ozone depleting substances.

This determination of acceptability expands EPA’s Significant New Alternatives Policy (SNAP) program’s list of acceptable substitutes by adding a number of substitutes with lower global warming potentials compared to what are predominately used today for the same uses.

Notice 31

What is included in the Notice?

- Four additional acceptable substitutes that reduce overall risk to human health and environment

Which industrial sectors are included?

- Refrigeration & Air Conditioning

How are substitutes evaluated?

- Review characteristics including ozone depletion potential (ODP), global warming potential (GWP), toxicity, flammability, occupational and consumer health/safety, local air quality, and ecosystem effects

SUMMARY OF ADDITIONAL ACCEPTABLE SUBSTITUTES

End-Use	Substitutes
Refrigeration & Air Conditioning	
Centrifugal Chillers (New)	Carbon Dioxide (CO ₂ , R-744) and HFO-1336mzz(Z)
Centrifugal Chillers (New & Retrofitted)	Opteon® XP30 (Proposed R-514A)
Heat Transfer (New & Retrofitted)	HFO-1336mzz(Z)
Ice Skating Rinks (New)	Carbon Dioxide (CO ₂ , R-744)
Industrial Process Air Conditioning (New)	Carbon Dioxide (CO ₂ , R-744) and HFO-1336mzz(Z)
Postitive Displacement Chillers (New)	Carbon Dioxide (CO ₂ , R-744) and HFO-1336mzz(Z)
Postitive Displacement Chillers (New & Retrofitted)	Opteon® XP30 (Proposed R-514A)
Retail Food Refrigeration – Refrigerated Food Processing and Dispensing Equipment (New & Retrofitted)	R-513A