Fact Sheet

Final Rulemaking
Protection of the Stratospheric Ozone: New Substitute in the Motor Vehicle Air Conditioning Sector under the Significant New Alternatives Policy (SNAP) Program

Under the Significant New Alternatives Policy (SNAP) program, EPA is listing HFO-1234yf as an acceptable substitute for ozone depleting substances (ODS) in motor vehicle air conditioning (MVAC) systems in new cars and other light duty-vehicles and is specifying the conditions necessary for its safe use. This new alternative, when used in accordance with industry standards, will have fewer environmental effects on the climate system than currently available systems. By approving this alternative under SNAP, EPA will provide an additional choice to the automotive industry. If the automotive industry chooses to adopt this alternative refrigerant, it shall follow procedures to use this refrigerant in a responsible manner.

HFO-1234yf has significantly lower climate impacts than the current car refrigerant, HFC-134a. HFO-1234yf has a GWP of 4, whereas HFC-134a has a GWP of 1,430.

Additional background:

In May 2010, EPA completed a joint rulemaking with the Department of Transportation to set Corporate Average Fuel Efficiency standards and standards for greenhouse gas emissions from passenger cars and other light-duty vehicles. That rule provides credits for vehicles using refrigerants with a global warming potential (GWP) less than that of HFC-134a. This provides incentive for car manufacturers to adopt HFO-1234yf, with a GWP 99.7% lower that of HFC-134a.

The European Union has banned the use of any refrigerant in MVAC systems with a GWP greater than 150. The European Union has a transitional period until 2017 when the full ban will be in place. In response, car manufacturers globally are redesigning systems.

This rule includes references to global technical standards developed by the Society of Automotive Engineers (SAE) International specifying how HFO-1234yf should be safely deployed in MVAC systems.