



PFAS in the Automotive Industry

Perfluoroalkyl & polyfluoroalkyl substances (PFAS) are a diverse group of synthetic compounds distinguished by their versatility, strength, and durability, setting them apart from other chemicals. There are perhaps as many as 700 commercially active substances that may be considered PFAS. However, not all PFAS compounds are the same - they contain unique properties and characteristics that yield distinct environmental and health profiles. PFAS compounds are highly differentiated, and while some may require limitations or prohibitions from certain uses, others have well-established profiles and do not pose unreasonable risks to human health or the environment when used appropriately.

The U.S. automotive industry depends on high-performing PFAS compounds to manufacture engine components and improve consumer safety technology in light- and heavy-duty vehicles, while fluorinated gases improve electric vehicle (EV) efficiency and refrigerate modern Mobile Air Conditioning (MAC) systems:

- **Refrigerants** for Mobile Air Conditioning (MAC) systems in 98% of all new light duty vehicles sold in the U.S. and 200M vehicles globally;
- **Thermal optimization** in EVs improve efficiency by using refrigerants to cool motors, batteries and other electronic components, as well as heat and cool the cabin;
- **Engine components** such as seals and tubing;
- **Sensors** for Advanced Driver Assistance Systems (ADAS) and autonomous vehicles;
- **Electric insulators** for in-car electronics and cabling.

In each case, PFAS compounds and fluorinated gases, specifically hydrofluoroolefins (HFOs), are essential due to their unique chemical properties. HFOs are generally not considered to be conventional PFAS compounds (eg. TSCA proposed PFAS reporting rule). While industry stakeholders continue to research and develop alternative chemistries to support current PFAS uses in the U.S. automotive Industry, there are no available alternatives.



U.S. AUTOMOTIVE ECONOMIC IMPACT*

In total, automotive manufacturing and related activity helps contribute over **2.4 million jobs** and **\$359 billion** toward GDP.

DRIVING SCIENCE-BASED MANAGEMENT POLICIES

Creating regulations that treat all PFAS compounds the same, or impose blanket restrictions on uses, would have devastating economic and safety consequences for the U.S. automotive industry. Sustainable management of PFAS compounds enables continued economic advancement when using a **science- and risk-based approach** to effectively administer regulations that protect human health and the environment.

*Quantifying the Economic Contribution of Key Industries which use PFAS as Vital Inputs, Inforum, Feb. 6, 2023