

FLUOROPOLYMERS STRENGTHEN THE BACKBONE OF AMERICA'S AI INFRASTRUCTURE

As innovation of artificial intelligence (AI) technology accelerates, fluoropolymer chemistries are increasingly enabling the infrastructure that powers it. These high-performance materials are essential to the AI data centers that house thousands of processors that run 24/7 and require sophisticated cooling and chemical handling systems.

Fluoropolymer chemistries are uniquely suited to meet these demands, and their continued availability for use in AI technology will be essential to making the United States the artificial intelligence capital of the world. Without them, the very foundation of America's AI industry would be at risk.

Why Fluoropolymers Matter to AI

Critical to Data Center Operations

- Transport cooling fluids through high-temperature, high-pressure environments
- Resist chemical degradation and extreme temperatures
- Provide critical insulating properties to ensure high-speed data communications within and across AI computing servers
- Mitigate risks from fire or overheating to help ensure the long-term reliability and functionality of AI processing systems

Essential to Semiconductor Manufacturing

- Enable ultra-pure chemical handling and transport for chip fabrication
- Piping for aggressive chemicals used to etch and clean silicon wafers
- High-performance gaskets, tubing, and filters that perform reliably in challenging conditions
- Coatings that provide corrosion resistance to metal substrates to withstand the harsh environments in the microchip manufacturing process

Risks of Regulatory Restrictions

Broad PFAS bans could disrupt AI progress by:

- Crippling innovation of AI technologies
- Reducing effectiveness and durability of essential components
- Creating semiconductor supply chain disruptions
- Reducing cooling system efficiency
- Increasing fire hazards and risks of chemical reactions
- Stifling global AI competitiveness

Fluoropolymer Industry's Commitment to Product Stewardship

The fluoropolymer industry supports smart regulation of fluoropolymers that can both enable technological leadership and protect public health and the environment by:

- Advocating for science-based regulation distinguishing non-bioaccumulative and chemically inert fluoropolymers from other PFAS
- Collaborating with policymakers, legislators, and other decision makers and stakeholders
- Articulating the critical role fluoropolymers play across American industry, manufacturing, and national defense
- Preserving access to the essential materials vital for AI operation and innovation

Fluoropolymers enable innovation. As America races to lead in AI, policymakers must recognize the foundational role of fluoropolymers in supporting both progress and safety. Without fluoropolymers, the future of AI could be slower, riskier, and increasingly led overseas.