



Electronics Fact Sheet

What are fluoropolymers?

- Fluoropolymers are a specialty plastic that possess a unique combination of properties that make them critical to modern life and a wide variety of sectors and industries.
- Fluoropolymers are one specific class of per- and polyfluoroalkyl substances (PFAS), a group of thousands of chemical compounds with varying characteristics, properties, and environmental and safety profiles.
- Importantly, fluoropolymers do not pose a significant risk to human health or the environment when used for their intended purposes.

Fluoropolymers are critical technologies with no viable alternatives.

- Fluoropolymers' unique combination of properties makes them fundamental to the products they enable.
- No alternatives offer the same combination of properties, including:
 - Fire resistance
 - Weather resistance
 - Temperature resistance
 - Chemical resistance
 - Non-wetting properties
 - Non-sticking properties
 - High-performance dielectric properties

Background Points

Uses of Fluoropolymers in the Electronics Industry

Fluoropolymers play a significant role in the electronics industry. Applications of fluoropolymers include the below:

- **Fluid handling components (tubing, piping, fittings, valves, pumps, vessels, instrumentation):** Fluoropolymers are the main material in the coatings and linings of these components. They enable greater integration, reduced and avoided contamination, and provide greater reliability and endurance.
- **Filters:** Fluoropolymers are used as membranes and casings in filters.
- **Semiconductor equipment parts:** Fluoropolymers are used for their heat resistance, UV-resistance, and chemical and contamination resistance.

- **Printed circuit boards:** Fluoropolymers are used to achieve a low dielectric constant, high heat and flame resistance, as well as low variations of conductivity due to low moisture absorbance in circuit boards.
- **Cushioning or release films in semiconductor moldings:** Fluoropolymers are used for their non-adhesiveness, heat resistance, and electrical properties.

Benefits of Fluoropolymers in the Electronics Industry

- Increase lifespan of the components they are used in by up to three times.
- Improve fire safety.
- Increase transmission speeds.
- Enable smaller components and final products.
- Enhance the installation and reliability of wires and optical and data cables.