



Renewable Energy 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 Renewable Energy Industry

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

- **Wind turbines:** Fluoropolymers are used in paints and coatings on the towers and blades of wind power generators because they provide high weather resistance and increased service life.
- **Solar installations:** Fluoropolymers are used in coatings for solar thermal installations as a protective armor from harsh environmental conditions, including extreme heat and moisture. Fluoropolymers also provide electrical insulation in the wiring of many critical components that are contained within solar panels, extending the lifetime of solar

panels by up to 25 years.

- **Energy Storage Systems:** Fluoropolymers are a crucial component of energy storage systems like lithium-ion batteries and PEM fuel cells which comprise an increasing share of renewable energy.

Benefits of Fluoropolymers in the Renewable Energy Industry

- Increased lifetime of components.
- Lower maintenance costs.
- Increased efficiency from improved functionality and reduced failures.
- Design flexibility.
- Corrosion prevention.
- Pollution abatement.