



Fluoropolymers: Aerospace

Introduction

Europe is a major player in the aviation manufacturing market and a major source of global exports. There are several specialised and highly skilled civil and military aerospace activities in specific Member States. These include fuselage design and assembly/testing, wing design and manufacturing, engine manufacturing, landing gear, fuel systems, helicopters, carbon fibre reinforced plastic components, internal data and power supply systems.

Applications

- Fuel lines and hoses
- Hydraulic systems
- O-rings, gaskets
- Electronic systems
- Coating for a variety of purposes (cables, wires...)
- Tapes, wires and cables
- Satellites: PTFE can be used as a fuel for satellite propulsion systems (solid fuel instead of liquid fuel)
- Exterior surface coatings

Benefits

- Enhance reliability
- Enhance safety
- Provides durable and effective protection against heat, UV, aggressive fuels, humidity, vibrations, and compression
- Weight reduction

Innovations

- **Release film aircraft:** With its heat resistance, chemical resistance, optical transparency, and non-adhesiveness, release film used in various aircraft applications (composite noise panels...).
- **In-flight connectivity (Electronics):** Recent development enables improved communication and internet access in aircraft with excellent telecommunications and positioning signals without increasing the size/weight of hardware required. This is achieved with cable-based antennas constructed with engineered fluoropolymers and light coaxial cable. Given the reduction in hardware capital costs, it is a cost-effective solution for improving in-flight entertainment.



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