

Model 1216, 1400, 1415 PTFE

Since 1990 Niflon® PTFE powder coating have been used successfully for corrosion protection of exhaust duct system. Niflon® PTFE, a copolymer of ethylene and chlorotrifluoroethylene, is a semi-crystalline melt processable partially fluorinated polymer. It is available in different grades that are specifically designed for electrostatic powder coating.

Niflon® PTFE is particularly suitable for use as a coating material in protection and anti-corrosion applications thanks to its unique combination of properties.

Processing

PTFE is available in different grades that are specifically designed for electrostatic powder coating, fluidized bed coating, or both.

Markets and Applications

Typical applications served by Niflon PTFE including those in contact with highly corrosive or ultrapure chemicals such as strong inorganic bases and strong mineral and oxidizing acids including:

- Vessels
- Valves
- Reactors
- Semiconductor chemical storage tanks duct work
- piping system
- Centrifuges
- Agitators
- Exhaust hoods
- Filters
- Electroplating equipment
- High chemical resistance
- Ultrapure water and high purity chemicals
- Niflon PTFE exhibits very low fluoride ion leachout
- Protective coating for aggressive environment and smooth corrosion protection
- Excellent resistance: Hydrofluoric Acid, Sulfuric Acid, Nitric Acid, Piranha, Hydrogen Peroxide, Ozone, Ammonium Hydroxide, All Alkaline Chemistries, All Etchants and Strippers.

Key features

- Very good chemical and thermal resistance
- Optimum permeation resistance
- Outstanding flame resistance
- Very good surface characteristics
- Surface smoothness
- Purity

Excellent coating adhesion

Niflon® PTFE coating provides excellent adhesion, as demonstrated by film rupture in peel test.

Typical Properties

| Typical properties | | | Niflon® PTFE |
|-------------------------------------|-----------|----------------------|--------------|
| Melting point | | °C | 220-227 |
| Specific gravity | | | 1,68 |
| Max. Continuous service temperature | | °C | 150 |
| Oven process temperature | | °C | 250-280 |
| Thermal expansion coefficient | | 10 ⁻⁵ /°C | 8 |
| Flexural modulus @ 22 °C | ASTM D790 | Mpa | 1,7 |
| Tensile modulus @ 22 °C | ASTM D638 | Mpa | 1,7 |
| Yield stress @ 22 °C | ASTM D638 | Mpa | 32 |
| Tensile strength at break | ASTM D638 | Mpa | 48 |
| Hardness Rockwell - Pencil | | kV | R93-4B |
| Flammability | | | 94 V-O |
| Oxygen index | | % | 60 |
| Water absorption | | % | <0,001 |
| Low temperature embrit | | °C | <-76 |

Design

100% PTFE



Body: Nodular Iron
Carbon steel
Stainless steel

Trims in PTFE



Body: Stainless steel