

3M™ Dyneon™ Perfluoroelastomer PFE 7403WZ

Perfluoroelastomer

3M Advanced Materials Division

Message:

The Dyneon Perfluoroelastomer compound PFE 7403WZ is a proprietary polymer-filled high temperature perfluoroelastomer specifically designed for use in semiconductor applications. It has excellent physical properties at continuous high service temperatures of 300°C and resistance to oxygen- and fluorine-containing plasma environments.

Special Features

- Proprietary 75 Shore A white compound
- Designed for high temperature applications
- Continuous operating temperature of > 300 °C
- Low particle generation
- Low weight loss
- Low outgassing
- High purity
- Excellent aggressive fluorinated plasma resistance
- Low long term compression set
- Excellent chemical resistance

Typical Applications

The Dyneon Perfluoroelastomer compound PFE 7403WZ is typically used across a wide range of wafer production processes.

| General Information | | | |
|------------------------------|-----------------------------------|-------------------|-----------------|
| Features | The degassing effect is low to no | | |
| | High purity | | |
| | Low compressive deformability | | |
| | Good chemical resistance | | |
| | Heat resistance, high | | |
| Uses | Semiconductor molding compound | | |
| Appearance | White | | |
| Forms | Thick sheet | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 2.11 | g/cm ³ | Internal method |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness (Shore A) | 74 | | ASTM D2240 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress (100% Strain) | 4.70 | MPa | DIN 53504 |
| Tensile Strength | 10.6 | MPa | DIN 53504 |
| Tensile Elongation (Break) | 230 | % | DIN 53504 |
| Compression Set | | | ASTM D395B |
| 200°C, 70 hr ¹ | 18 | % | ASTM D395B |
| 316°C, 70 hr ² | 58 | % | ASTM D395B |
| NOTE | | | |

| | |
|----|----------------|
| 1. | 25% deflection |
| 2. | 18% deflection |

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