

# Aromatic Polyester Filled PTFE

Polytetrafluoroethylene (PTFE + 10% Aromatic Polyester)

**PTFE**, reinforced with 10% aromatic polyester (ARP) improves thermal dimensional stability, compressive strength and creep resistance (for components requiring good mechanical properties).

| Properties                        | Test method  | Unit                  | Value              |
|-----------------------------------|--------------|-----------------------|--------------------|
| <b>Mechanical</b>                 |              |                       |                    |
| Tensile strength                  | D4745        | MPa                   | ≥ 15               |
| Elongation                        | D4745        | %                     | ≥ 220              |
| Compressive strength (1% strain)  | D695         | MPa                   | -                  |
| Deformation under load            | D621         | D                     | 10 - 12            |
| Permanent deformation             | D621         | %                     | 4,6 - 6,5          |
| Shore hardness                    | D2240        | %                     | ≥ 56               |
| Ball indentation hardness         | D785         | MPa                   | ≥ 30               |
| <b>Thermal</b>                    |              |                       |                    |
| Melting temperature               | -            | °C                    | -                  |
| Glass transition temperature (Tg) | -            | °C                    | -                  |
| Thermal conductivity              | C177         | W / (m * K)           | 0,35               |
| Coef. of linear thermal expansion | D 696        | 10 <sup>-5</sup> / °C | 8,5 - 9,5          |
| Continuous service temperature    | -            | °C                    | -100 up to 260     |
| Short term service temperature    | -            | °C                    | -                  |
| Heat deflection temperature       | DIN 75 HDT/A | °C                    | -                  |
| Flammability                      | UL 94        | -                     | V-0                |
| Flammability (oxygen index)       | -            | %                     | -                  |
| <b>Electrical</b>                 |              |                       |                    |
| Dielectric constant at 1MHz       | D150         | 10 <sup>6</sup> Hz    | -                  |
| Dissipation factor at 1MHz        | D150         | 10 <sup>6</sup> Hz    | -                  |
| Volume resistivity                | D257         | Ω * cm                | ≥ 10 <sup>18</sup> |
| Surface resistivity               | D257         | Ω                     | ≥ 10 <sup>17</sup> |
| Dielectric strength               | D149         | kV / mm               | -                  |
| <b>Additional Data</b>            |              |                       |                    |
| Density                           | D 792        | g / cm <sup>3</sup>   | 2,03 - 2,09        |
| Water absorption (saturation)     | D 570        | %                     | 0,01               |
| Humidity absorption (saturation)  | D 570        | %                     | -                  |
| Food compliance                   | EEC          | -                     | Yes                |
| Food compliance                   | FDA          | -                     | Yes                |
| Coefficient of Friction (static)  | D 1894       | -                     | 0,14 - 0,18        |
| Shapes                            | Rod          | Sheet                 | Tube               |
| Colour                            | Tan          |                       |                    |

- **PTFE + 10% Aromatic Polyester** offers excellent resistance to chemical corrosion and continuous high & low service temperatures.

*The data provides information about the products and offers a guide for material selection. This does not provide an assurance of specific properties or the products suitability for a particular application.*

*It solely remains the customers responsibility to test and assess the suitability and compatibility of the products for it's intended applications, processes and uses. The customer undertakes all liability in respect of the application, processing or use of the aforementioned information or product.*

- \* Long term service temperature are based on the thermal ageing of the polymer by oxidation, resulting in a decrease in mechanical capabilities

*The actual property values of a finished product may differ from the indicated values stated.*