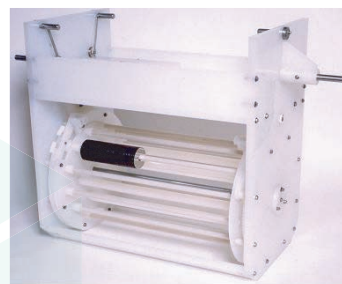




PVDF 1000

Semi-crystalline plastic, PVDF 1000 is an unreinforced crystalline fluoropolymer, which combines good mechanical, thermal and electrical properties with excellent chemical resistance. It also shows good resistance to high energy radiations. In addition, the composition of the raw material used for the manufacturing of PVDF complies with EU/FDA regulations for food-compatible plastic materials. All these properties make this product a very versatile engineering material and with numerous applications in diverse types of industry.

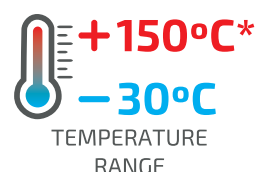
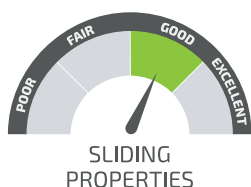
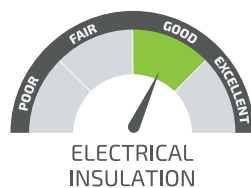
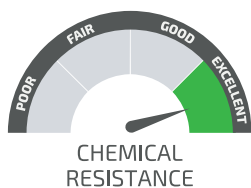


MAIN CHARACTERISTICS

- ◆ High maximum service air temperature (150°C in continuous service)
- ◆ High mechanical resistance, creep and stiffness (higher than other fluoropolymers)
- ◆ High chemical resistance and hydrolysis resistance
- ◆ Good resistance to wear, sliding and contraction
- ◆ Very good dimensional stability
- ◆ Good dielectric properties and good electrical insulation
- ◆ Excellent resistance to UV rays and environment
- ◆ Intrinsic flame resistance, much higher than that of the remaining fluoropolymers.

APPLICATIONS

- ◆ Electrical/electronic insulation (including many components of semiconductor processes)
- ◆ Structural components requiring high resistance and stiffness at high temperatures



*continuously (20.000H)



| PROPERTIES | TEST METHODS | UNITS | PVDF |
|--|--------------|-----------------------------------|--------------------|
| COLOR | - | - | NATURAL |
| DENSITY | ISO 1183 | g/cm ³ | 1.78 |
| WATER ABSORPTION | ISO 62 | % | 0.04 |
| MOISTURE ABSORPTION | ISO 62 | % | 0.01 |
| THERMAL PROPERTIES | | | |
| GLASS TRANSITION TEMPERATURE VST/B/50 | ISO 306 | °C | 138 |
| GLASS TRANSITION TEMPERATURE VST/A/50 | ISO 306 | °C | 160 |
| DEFORMATION TEMPERATURE HDT/B | ISO 75 | °C | 145 |
| DEFORMATION TEMPERATURE HDT/A | ISO 75 | °C | 104 |
| COEFFICIENT OF LINEAR THERMAL EXPANSION | ISO 11359 | K ⁻¹ *10 ⁻⁴ | 1.3 |
| THERMAL CONDUCTIVITY AT 20°C | ISO 22007-4 | W/(m*K) | 0.13 |
| GLASS TRANSITION TEMPERATURE | ISO 3146 | °C | -40 |
| MELTING TEMPERATURE | ISO 3146 | °C | 171 |
| FLAMMABILITY ⁶ | | | |
| "OXYGEN INDEX" | ASTM D2863 | % | 44 |
| ACCORDING TO UL94 (1.5/3MM DE ESPESSURA) | - | - | V-0 |
| MECHANICAL PROPERTIES | | | |
| TENSILE STRESS AT YIELD | ISO 527 | MPa | 58 |
| ELONGATION AT YIELD | ISO 527 | % | 17 |
| TENSILE STRESS AT BREAK | ISO 527 | MPa | 46 |
| ALONGAMENTO NA RUTURA | ISO 527 | % | 29 |
| ROCKWELL HARDNESS | ISO 2039 | MPa | 120 |
| SHORE HARDNESS | ISO 868 | | 80 |
| TENSION TEST | ISO 178 | MPa | 80 |
| MODULUS OF ELASTICITY | ISO 527 | MPa | 2125 |
| ELECTRICAL PROPERTIES | | | |
| VOLUME RESISTIVITY | IEC 60093 | Ω*cm | ≥ 10 ¹⁰ |
| SURFACE RESISTIVITY | IEC 60093 | Ω | ≥ 10 ¹³ |
| CONSTANT DIELECTRIC AT 1MHz (εr) | IEC 60250 | - | 7 |
| DIELECTRIC DISSIPATION FACTOR (tanδ) | IEC 60250 | - | 0.24 |
| DIELECTRIC STRENGTH | IEC 60243-1 | kV/mm | 27 |
| RESISTANCE TO SURFACE DISCHARGE | IEC 60112 | V | CTI 600 |

P
LANEWA