

## APSOplast® PTFE N100 natural (white)

## Engineering Plastic Technology Technical Data Sheet

### Application purpose and characteristics

Suitable for contact with foodstuffs, especially for parts in drinking water systems and mechanical plumbing device applications.

High maximum service temperature and excellent resistance to low temperatures, exceptional resistance to chemicals and hydrolysis, good electrical insulation properties, exceptional dielectric properties. UV resistance, extremely non-adhesive surface.

### Product description

Material name, long description	Polytetrafluorethylene
Material name, short description	PTFE
Material Code	PTFE N100.011-00
Density	2.130 - 2.190 g/cm <sup>3</sup>
Color	natural (white)

### General compound description

Remarks	<p>APSOplast® PTFE N100 is listed und approved by NSF/ANSI 61, Drinking Water System Components - Health Effects.</p> <p>Certified for Gasket/Sealing Materials: Cold water - The temperature used during testing is 23 +/- 2°C. Commercial hot - The temperature used during testing is 82 +/- 2 °C.</p> <p>Also evaluated for use in Mechanical Plumbing Device applications with a maximum use restriction of 10.0 sq. in./L. Certified for a maximum surface area to volume of 10 sq. in./L.</p>
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### Mechanical properties

Tensile strength	Test value: ≥ 20 MPa Test norm: ASTM D 4894
Elongation at rapture	Test value: ≥ 200 % Test norm: ASTM D 4894
Residual Deformation After 24 h	Test value: 6 - 7.5 % Test norm: ASTM D 621 Test parameter: after 24h relaxation at 23°C
Deformation under load	Test value: 10 - 13 % Test norm: ASTM D 621 Test parameter: 140 Kg/cm <sup>2</sup> for 24h at 23°C
Compressive strength	Test value: ≥ 4 N/mm <sup>2</sup> Test norm: ASTM D 695 Test parameter: at 1% deformation
Shore hardness	Test value: ≥ 54 Shore D Test norm: ASTM D 2240
Ball indentation hardness	Test value: ≥ 23 MPa Test norm: ASTM D 785
Static friction coefficient	Test value: 0.08 - 0.10 Test norm: ASTM D 1894
Sliding wear	Test value: 2.900 Test norm: ASTM D 3702 Test parameter: factor K
Dynamic friction coefficient	Test value: 0.06 - 0.08 Test norm: ASTM D 1894

### Thermal properties

Coefficient of linear thermal expansion	Test value: 12 - 15 * 10 <sup>-5</sup> /°C Test norm: ASTM D 696 Test parameter: from 25 to 100°C
Thermal conductivity	Test value: 0.34 W/m·K Test norm: ASTM C 177

### Electrical properties

Dielectric strength	Test value: ≥ 30 kV/mm Test norm: ASTM D 149
Volume resistivity	Test value: 10 <sup>18</sup> Ohm·cm Test norm: ASTM D 257
Surface resistivity	Test value: 10 <sup>17</sup> Ohm Test norm: ASTM D 257

### Other properties

Flammability	Test value: V-0 Test norm: UL 94
Water absorption at saturation	Test value: 0.01 % Test norm: ASTM D 570

### Approvals

- NSF/ANSI 61, Drinking Water System Components - Health Effects
- FDA 21 CFR 177.1550; Perfluorcarbon Resins of the Food and Drug Administration.
- EU 1935/2004; EC 10/2011, on plastic materials and articles to come in contact with foodstuff.

