Teflon® PTFE 7A X
Polytetrafluoroethylene
DuPont Fluoropolymers

Technical Data

Product Description
Teflon® PTFE 7A X is a white powder with small particle size and high bulk density. The small particle size of Teflon® PTFE 7A X helps to minimize voids even at relatively low molding pressures. High bulk density increases the size of moldings possible from a given mold or press opening. Teflon® PTFE 7A X is preferred for large moldings, such as billets, requiring optimum mechanical and electrical properties. It is also used in a mixture with fillers when they are added to modify the mechanical properties of moldings. Properly processed products made from neat Teflon® PTFE 7A X provide the superior properties typical of the fluoroplastic resins: retention of properties after service at 260 °C (500 °F), useful properties at -240 °C (-400 °F), chemical inertness to nearly all industrial chemicals and solvents, and low friction and anti-stick surfaces. Dielectric properties are outstanding and stable with frequency and temperature. Molded products have moderate stiffness and high elongation.

Teflon® PTFE 7A X resists ignition and does not promote flame spread. When ignited by flame from other sources, the contribution of heat is small and with little smoke. Statements, or data, regarding behavior in a flame situation are not intended to reflect hazards presented by this or any other material when under actual fire conditions.

Typical Applications
Many end products are fabricated from moldings of Teflon® PTFE 7A X, including skived film and sheet, gaskets, packings, mechanical seals, bridge or pipeline bearing pads, shaft bearings, electrical insulators, piston rings, expansion bellows, diaphragms, and chemical linings. The use of fillers provides a wide choice of modified mechanical properties.

General
Material Status
• Commercial: Active

Literature
1

UL Yellow Card
2

Search for UL Yellow Card

• DuPont Fluoropolymers
• Teflon® PTFE

Availability
• Asia Pacific
• Europe
• Latin America
• North America

Features
• Food Contact Acceptable
• Good Chemical Resistance
• Good Stiffness
• High Elongation
• Low Friction
• Low Smoke Emission
• Solvent Resistant

Uses
• Bearings
• Diaphragms
• Electronic Insulation
• Film
• Gaskets
• Liners
• Sealing Devices
• Seals
• Sheet

Agency Ratings
• FDA 21 CFR 177.1550

Appearance
• White

Forms
• Powder

Processing Method
• Compression Molding
• Sintering

Physical
Nominal Value (English) | Nominal Value (SI) | Test Method
--- | --- | ---
Specific Gravity
-- | 2.16 | 2.15 g/cm³ | ASTM D4894
-- | 2.15 g/cm³ | ISO 12086
Apparent Density
0.46 g/cm³ | 0.46 g/cm³ | ASTM D4894
ISO 12086
Average Particle Size
1.3 mil | 34 µm | ISO 13320
1.3 mil | 34 µm | ASTM D4894
Water Content
-- | < 0.040 % | < 0.040 % | ISO 12086
-- | < 0.040 % | ASTM D4894

Mechanical
Nominal Value (English) | Nominal Value (SI) | Test Method
--- | --- | ---
Tensile Strength (0.00512 in (0.130 mm))
5000 psi | 34.5 MPa | ASTM D4894
ISO 12086
Tensile Elongation
Break, 0.00512 in (0.130 mm)
380 % | 380 % | ASTM D4894
ISO 12086
### Thermal

<table>
<thead>
<tr>
<th>Property</th>
<th>Nominal Value (English)</th>
<th>Nominal Value (SI)</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Temperature</td>
<td></td>
<td></td>
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<tr>
<td>‐ 4</td>
<td>603 to 639 °F</td>
<td>317 to 337 °C</td>
<td>ISO 12086</td>
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<tr>
<td>‐ 5</td>
<td>633 to 669 °F</td>
<td>334 to 354 °C</td>
<td>ASTM D4894</td>
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<td>Thermal Instability Index</td>
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<td>‐</td>
<td>&lt; 3.00</td>
<td>&lt; 3.00</td>
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### Notes

1. These links provide you with access to supplier literature. We work hard to keep them up to date; however, you may find the most current literature from the supplier.

2. A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however, this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

3. Typical properties: these are not to be construed as specifications.

4. Second

5. Initial
Where to Buy

Supplier

DuPont Fluoropolymers
Wilmington, DE USA
Telephone: 302-479-7731
Web: http://www2.dupont.com/Teflon_Industrial/en_US/

Distributor

Please contact the supplier to find a distributor for Teflon® PTFE 7A X