Technora®

Key Features
- High tenacity & modulus
- Excellent abrasion & fatigue resistance
- Excellent chemical & steam resistance
- Very low creep
- High thermal stability
- Lower moisture regain than other para-aramids

Disadvantages
- Lower modulus compared to carbon and high modulus para-aramids
- Poor UV resistance

FIBER-LINE® PROCESS FOR
TECHNORA®
- Coating
- Twisting
- Polymer Jacket Extrusion
- Stranding
- Overbraiding
- Precision Winding

FIBER-LINE® TECHNORA® PRODUCTS
- Ripcords
- Strength Members
- Industrial Fabric Yarn
- Wire Harness Yarn
- Drive Belt & Hose Reinforcement
- Synthetic Wire Rope

Molecular Structure

Chemical Name
Diaminodiphenylether-para-phenylenediamineterephthaloyldichloride.

Manufacturer
Teijin™.

History
Technora® was first made commercially available in 1987.

Composition
Technora® is an aromatic copolyamide that has a highly oriented molecular structure, consisting of both para and meta linkages. Technora is produced by condensation polymerization of different copolymers, yielding a high modulus, low creep, and thermally stable fiber.

Common Deniers
200, 400, 720, 1000, 1500.

Types
T-200 Rubber Reinforcement.
T221, T220N Rope, Cable, Cord.
T-240 Fabrics, Composites.
**TECHNORA®**

<table>
<thead>
<tr>
<th>Property</th>
<th>UOM</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breaking Tenacity</strong></td>
<td>g/d</td>
<td>28</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>Ratio</td>
<td>1.39</td>
</tr>
<tr>
<td><strong>Elongation @ Break</strong></td>
<td>%</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Tensile Modulus</strong></td>
<td>g/d</td>
<td>590</td>
</tr>
<tr>
<td><strong>Moisture Regain</strong>*</td>
<td>%</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Creep</strong></td>
<td>%</td>
<td>&lt; 1.5</td>
</tr>
<tr>
<td><strong>Shrinkage</strong>*</td>
<td>%</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td><strong>Melt Point</strong></td>
<td>°C</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Decomposition Temp.</strong></td>
<td>°C</td>
<td>500</td>
</tr>
</tbody>
</table>

* Equilibrium moisture regain @ 55% RH  ** Creep @ 40%-58% ultimate tensile strength  *** Shrinkage in dry air @ 177 C for 30 minutes

This data is provided for informational purposes only, and does not constitute a specification. FIBER-LINE® makes no warranty, express or implied, that the product conforms to these values. Contact your FIBER-LINE® representative for exact product details which conform to your specific requirements.

**CHEMICAL COMPATIBILITY**

Chemical Resistance to Acid: Degrades in Formic, Hydrochloric and Sodium Hydroxide acid.

Chemical Resistance to Alkali: Strong alkalis will attack at high temperature or concentration.


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### PROPERTY RESISTANCE

<table>
<thead>
<tr>
<th>Property</th>
<th>Resistance</th>
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</thead>
<tbody>
<tr>
<td>Abrasion Resistance</td>
<td>✓</td>
</tr>
<tr>
<td>Ultraviolet (UV) Resistance</td>
<td>✗</td>
</tr>
<tr>
<td>Flame Resistance</td>
<td>✓</td>
</tr>
<tr>
<td>Chemical Resistance (Acid)</td>
<td>✓</td>
</tr>
<tr>
<td>Chemical Resistance (Alkali)</td>
<td>✓</td>
</tr>
<tr>
<td>Chemical Resistance (Organic Solvent)</td>
<td>✓</td>
</tr>
<tr>
<td>Strength Retention (H2O)</td>
<td>✓</td>
</tr>
</tbody>
</table>

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**TECHNORA® DATA**
ABOUT FIBER-LINE®

For over 25 years, FIBER-LINE® has provided science-driven expertise that improves the performance and the end-use processing of high performance fibers. Our products enable the search for new energy reserves and extend the life of fiber optic telecommunication cables. They also add important characteristics, such as SWELLCOAT® water-blocking, water repellence, adhesion, color, and wear and UV-resistance to these and many other applications. We believe that our ongoing commitment to protect the environment, to remain at the forefront of fiber and coating technology, and to ‘treat others as we want to be treated’ will continue to drive the success of our customers, shareholders, and employees.

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