High Performance Fibers
Polybenzoxazole (PBO) is a high-performance, heat-resistant fiber with a benzene-fused oxazole ring structure. The fiber is almost twice as strong as aramid fibers and about 10 times stronger than steel making it the strongest manmade organic fiber. It also has a 100°C higher decomposition temperature than aramid and exhibits very little creep under stress making it suitable for high continuous loads.

EuroFibers offers Zylon® a trademarked name for a range of thermoset liquid-crystalline polyoxazole manufactured by the Toyobo Corporation. PBO has very low creep rates and low abrasion resistance. It has poor UV resistance and should be protected when exposed to sunlight. Resistant to weak acids, bases, bleach and organic solvents. Degradation induced by strong acids at high temperatures.
### HIGH PERFORMANCE FIBER CHART

#### Fiber Description

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LCP Polyester-Polyarylate</td>
<td>Vectran®</td>
<td>Light Gold</td>
<td>1.40</td>
<td>26 – 29</td>
<td>23 – 26</td>
<td>3.2 – 3.6</td>
<td>65 – 93</td>
<td>3.3 – 3.6</td>
<td>150 ºC</td>
<td>MP: 330 ºC</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>Para-Aramid</td>
<td>Twaron®</td>
<td>Yellow</td>
<td>1.44 – 1.47</td>
<td>18 – 29</td>
<td>16 – 26</td>
<td>2.3 – 3.7</td>
<td>55 – 140</td>
<td>1.5 – 4.4</td>
<td>300 ºC</td>
<td>Does not melt, Decomposes @ 500ºC</td>
<td>1.5 – 6.5</td>
</tr>
<tr>
<td>Aramid Copolymer</td>
<td>Technora®</td>
<td>Gold</td>
<td>1.39</td>
<td>28</td>
<td>25</td>
<td>3.4</td>
<td>72</td>
<td>4.6</td>
<td>300 ºC</td>
<td>Does not melt, Decomposes @ 500ºC</td>
<td>2.0</td>
</tr>
<tr>
<td>HMPE (gel spun)</td>
<td>Dyneema®</td>
<td>White</td>
<td>0.97</td>
<td>25 – 44</td>
<td>22 – 39</td>
<td>2.1 – 3.8</td>
<td>68 – 145</td>
<td>2.5 – 3.9</td>
<td>70 ºC</td>
<td>MP 143-155 ºC</td>
<td>0.0</td>
</tr>
<tr>
<td>HMPE (solid state)</td>
<td>Endumax®</td>
<td>White</td>
<td>0.97</td>
<td>28</td>
<td>25</td>
<td>2.4</td>
<td>175</td>
<td>1.9</td>
<td>80 ºC</td>
<td>MP 143-155 ºC</td>
<td>0.0</td>
</tr>
<tr>
<td>PBO</td>
<td>Zylon®</td>
<td>Gold</td>
<td>1.54 – 1.56</td>
<td>42</td>
<td>37</td>
<td>5.7</td>
<td>175 – 275</td>
<td>2.5 – 3.5</td>
<td>400 ºC</td>
<td>Does not melt, Decomposes @ 650ºC</td>
<td>0.6 – 2.0</td>
</tr>
</tbody>
</table>

### Physical Property Definitions

- **Breaking Tenacity:** break load in grams force per denier weight or centinewton per dtex weight.
- **Breaking Strength:** break load divided by fiber cross sectional area.
- **Modulus:** resistance to stretch, or slope of load-elongation curve.
- **Elongation at Break:** change in yarn length at break, expressed as percent of initial gage length.

Moisture regain tested at standard conditions of 22 ºC at 65% relative humidity

### Trademarks

- Dyneema® and Trevo® are registered to DSM
- Twaron®, Technora® and Endumax® are registered to Teijin Aramid
- Vectran® is registered to Kuraray
- Zylon® is registered to Toyobo
- Spectra® is registered to Honeywell
- Kevlar® and Tensylon® are registered to DuPont
- Alkex® is registered to Hyosung
- Heracron® is registered to Kolon
- Doyentrontex® is registered to Beijing Tongyizhong
Fiber Enhancing Services

Next to a wide variety of High Performance Fibers, EuroFibers has the fiber enhancing capabilities to provide Prisma® coated, twisted, assembled, intermingled, and engineered yarns, short cut and staple fiber, exactly according to your specification.

P R I S M A ®  C O A T I N G

Our proprietary Prisma® coating technology has been widely adopted all over the world by rope makers, net makers, weavers and knitters of products based on high-performance fibers. Prisma® coating technology helps to improve the performance and extend the life of ropes, cables, nets and fabrics.

T W I S T I N G

By twisting the yarn, we create a compact bundle that is easier to process. We master the different kinds of twisting, like 2-for-1 twisting and ring twisting and have the ability to check every meter of yarn on imperfections.

A S S E M B L I N G

Our state-of-the-art Roblon twisting machine can produce a large range of customer-dedicated, intermediate products that make things a lot easier for producers of ropes and round slings. Our machines have a substantial range and can assemble from 5,000 to 200,000 dtex.

C H O P P I N G

EuroFibers can chop all coated and uncoated high-performance fibers to short-cut fiber or crimped staple fiber. These chopped high-performance fibers are used in a variety of applications, from concrete to cotton reinforcement, to improve process and product performance.