Be careful when choosing raw material!

**Geosynthetic Reinforcements in high alkaline conditions**

<table>
<thead>
<tr>
<th>Common evaluation</th>
<th>Appropriate evaluation</th>
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<tr>
<td><strong>Tensile forces</strong></td>
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<tr>
<td><strong>Chemical impact</strong></td>
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<tr>
<td>pH &gt; 9</td>
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</tbody>
</table>

**PET**

- **Slight microcracks** in the material surface due to chemical impact
- **Slight** cross-section reduction
- **Increased** cross-section reduction

**Microscope image “strand”**

**Microscope image “fibre”**

**Test results:**

- **120 years** projected durability
- **1000-times** shorter durability
- **3 weeks** real durability

Test conditions pH = 12.6 (Saturated Calcium Hydroxide) at 40 °C under load

**Therefore our recommendation:**

- **PVA**

*Reliable long-term reinforcement: no surface damage due to hydrolysis, cross-section reduction.*

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1. Typically the projected durability, with respect to chemical degradation, is determined without tensile stresses.