Bentonite and rubber swelling tapes
OUR MISSION:
FORWARD CONSTRUCTING.

It is our mission not only to provide the very latest building technology, but also to be one crucial step ahead of the game at all times. That is why we are constantly undertaking pioneering work in all product areas. Our employees consistently put their extensive practical experience and creativity to use in the interests of our customers. In constant dialogue with our target groups on a partnership basis, we are already developing the products today that will be needed tomorrow. Our momentum continues to set new benchmarks in structural engineering – yesterday, today and tomorrow, too. This is what we mean by “forward constructing”.

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SWELLFLEX®

THE PRODUCT

SWELLFLEX® waterstop tapes are used for sealing construction joints in concrete constructions. They can be butt jointed; their high swelling power generates a sealing pressure against the surrounding concrete. In the case of bentonite waterstop tapes, this creates a self-injecting effect – i.e. the material penetrates into all surrounding cracks and cavities and seals them. Rubber waterstop tapes, by contrast, retain their form and are therefore ideal for use with prefabricated components.

ADVANTAGES

- SWELLFLEX® waterstop tapes as per watertight structure guidelines (with general test certificate)
- Resistant to ageing
- Suitable for changing water levels
- Resistant to chemical and physical stress
- Can be combined with other joint seals

THE APPLICATION

SWELLFLEX® quality waterstop tapes are used in construction joints which are constantly or occasionally subjected to water pressure. The waterstop tapes should be installed between the reinforcement layers, at least 80 mm apart.

- For sealing in all horizontal and vertical structural joints
- For any kind of construction projects
TECHNICAL INFORMATION

SWELLFLEX® BS
- The bentonite swelling tape is used for sealing construction joints which are constantly or occasionally subjected to groundwater, water accumulating on slopes and/or surface water.
- Made of sodium bentonite and is talc-powdered.
- Its clay-based material creates a self-injecting effect when it comes into contact with water, making it ideal for in-situ concrete construction.

SWELLFLEX® BT
- SWELLFLEX® BT differs from SWELLFLEX® BS due to its additional anti-moisture protective coating, which is applied at the factory. This prevents the tape from swelling prematurely in the first two or three days as a result of rain.

SWELLFLEX® RB
- The rubber swelling tape provides an internal joint seal and is used to protect components with high resistance to water penetration against pressurised and non-pressurised water and soil moisture.
- The swellable joint sealing profile is used in a number of areas, including system building construction, tubbing construction and pipe jacking.

M-FLEX ASSEMBLY ADHESIVE
- For continuous installation on concrete surfaces
- 290 ml cartridges
- Yields around 10 m, depending on concrete quality

MOUNTING RAIL
- For continuous installation on concrete surfaces
- Without fastening materials (steel nails or nailed dowels)
- Length 1.0 m, width 26.9 mm
- Hole spacing 20 mm
- Mounting distance < 300 mm
TECHNICAL INFORMATION

MATERIAL CHARACTERISTICS

<table>
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<tr>
<th></th>
<th>Bentonite waterstop tape</th>
<th>Rubber swell strip</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Material type,</td>
<td>SWELLFLEX® BS</td>
<td>SWELLFLEX® BT</td>
</tr>
<tr>
<td>components</td>
<td>Sodium bentonite, butyl rubber</td>
<td>Sodium bentonite, butyl rubber</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coating</strong></td>
<td>Talc-powdered</td>
<td>Anti-moisture protective coating</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Black/dark grey</td>
<td>Black/dark grey</td>
</tr>
<tr>
<td><strong>Shape</strong></td>
<td>Rectangular</td>
<td>Rectangular</td>
</tr>
<tr>
<td><strong>Density [g/cm³]</strong></td>
<td>~1.80</td>
<td>~1.80</td>
</tr>
<tr>
<td><strong>Dimensions [mm]</strong></td>
<td>16 x 21 18 x 24</td>
<td>16 x 21 18 x 24</td>
</tr>
<tr>
<td>**Resistance to water</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>penetration [bar]</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Swelling power [M.-%]</strong></td>
<td>≥ 180</td>
<td>≥ 100</td>
</tr>
<tr>
<td>**Swelling pressure</td>
<td>0.5</td>
<td>0.56</td>
</tr>
<tr>
<td>[N/mm²]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fire behaviour</strong></td>
<td>Material class B2 – normal combustibility</td>
<td>Material class E</td>
</tr>
<tr>
<td><strong>Toxicity</strong></td>
<td>Hazardous material, no poison class, no risk to drinking water</td>
<td></td>
</tr>
<tr>
<td><strong>Distance to reinforcement</strong></td>
<td>Min. 80 mm</td>
<td></td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Before concreting, check the waterstop tape to ensure that it has not swelled too early.</td>
<td>The anti-moisture protective coating only dissolves in the alkaline environment created by fresh concrete.</td>
</tr>
</tbody>
</table>

1) See standard sizes for sequence
2) Test principle "Joint seals in components made of concrete with high resistance to water penetration in areas that are in contact with the ground, PG-FBB, October 2012"
3) SWELLFLEX BS/BT: As per DIN 4102-1, SWELLFLEX RB: As per DIN EN 13501-1

TRANSPORTATION AND STORAGE

- Waterstop tapes must be loaded and unloaded carefully and secured for transportation.
- They must be examined for damage and completeness on delivery.
- Waterstop tapes must be stored in their original packaging in a dry, frost-free location until used.
INSTALLATION INSTRUCTIONS
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