**SikaSwell® S-2**

One part polyurethane, extrudable swelling waterstop (bentonite-free)

**Description**

SikaSwell S-2 is a specially formulated, high-performance, swellable, one-component, polyurethane-based waterstop for use in all kinds of construction joints. Swelling rubber creates a compression seal within joint, blocking the passage of water.

**Where to Use**

- Designed for construction joints in new watertight concrete structures.
- Excellent for sealing pipe penetrations through walls and floor slabs.
- Excellent for sealing joints between precast elements.
- May be applied to horizontal, vertical and overhead surfaces.
- Ideal for watertight construction joints between new and existing concrete.

**Advantages**

- Swells up to 100% in potable water, slightly less in salt water and wastewater.
- Permanently water resistant, with no leaching and does not dissolve in water.
- Capable of sealing construction joints with head pressures of up to 50 psi (115 ft. head).
- Elastic-withstands wet/dry cycling.
- Easy, simple application.
- Adaptable in the field to suit job requirements.
- No nails, glue, or hooks required.
- Controlled expansion eliminates cracking in fresh concrete.
- Offers resistance to various chemicals.
- Thixotropic properties allow SikaSwell S-2 to seal irregular joint surfaces.
- Very economical.
- Saves labor by eliminating inverted keyways, split forming, heat splicing, special fittings and tying to rebar associated with conventional PVC waterstops.
- No mixing required.
- Allows more thorough vibration of concrete at joint, resulting in better concrete consolidation which aids in achieving a watertight joint.

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**Typical Data (Material and curing conditions 73°F (23°C) and 50% R.H.)**

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

<table>
<thead>
<tr>
<th>Shelf life</th>
<th>9 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Conditions</td>
<td>For best results, store dry at 70°F (20°C) before using.</td>
</tr>
<tr>
<td>Color</td>
<td>Red</td>
</tr>
<tr>
<td>Temperature of Product for Best Application</td>
<td>50° to 90°F</td>
</tr>
<tr>
<td>Tack Free Time</td>
<td>2-3 hours</td>
</tr>
<tr>
<td>Shore A Hardness</td>
<td>Swollen (7 days in tap water) &gt;10</td>
</tr>
<tr>
<td></td>
<td>Non Swollen (7 days) 40-60</td>
</tr>
<tr>
<td>Swelling Capacity</td>
<td>1 day &lt;20%</td>
</tr>
<tr>
<td></td>
<td>7 days &gt;100%</td>
</tr>
<tr>
<td></td>
<td>Reduced and delayed swelling properties in salty water.</td>
</tr>
</tbody>
</table>

**Suggested Cross Section of Extruded Bead**

<table>
<thead>
<tr>
<th>Concrete Thickness</th>
<th>Number of Beads (in.)</th>
<th>Side length of triangular bead (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-12</td>
<td>1</td>
<td>5/8</td>
</tr>
<tr>
<td>12-20</td>
<td>1</td>
<td>3/4</td>
</tr>
<tr>
<td>&gt; 20</td>
<td>2</td>
<td>3/4</td>
</tr>
</tbody>
</table>

**Note:** If the maximum size aggregate in the concrete is greater than 1 inch, use 3/4 inch triangular section(s).
**Coverage**

- 20 fl. oz. uni-pac sausage seals: Triangular Yield
  - 5/8 x 5/8 x 5/8 in. 18 lineal ft.
  - 3/4 x 3/4 x 3/4 in. 12 lineal ft.

*Note: Yield may vary based on substrate irregularities.*

**Packaging**

Disposable 20 fl. oz., moisture-proof uni-pac sausages, 20/carton.

**How to Use**

**Surface Preparation**

Clean all surfaces. Substrate must be clean, sound, free of loose particles, dust, laitance, oils, and other contaminants. Surface may be dry or damp, with no presence of standing water. Do not leave the product in contact with wet concrete, or on a surface with a very high moisture content, for a long period of time, before casting new concrete. These conditions will decrease the adhesion between the SikaSwell S-2 bead and the surface of the joint.

**Application**

Recommended application temperatures: 50°-90°F. Extrude material using Sika MK-5 bulk caulking gun or other approved bulk gun. Cut the nozzle to obtain a triangular extrusion section with a size fulfilling effective needs (or use nozzle included in carton of SikaSwell S-2). Apply a uniform, continuous bead to the hardened concrete. Wait for approximately 2 hours after placement of the SikaSwell S-2 before placing concrete. The minimum thickness of concrete around the SikaSwell S-2 should be 4 inches on each side (reinforced concrete) or 6 in. on each side (non-reinforced concrete) and 4 inches on top. For optimum application, store at 70°F for a minimum of 8 hours prior to use; if the material appears stiff, knead the sausage for a short time before placing in bulk gun.

**Limitations**

- Not suitable for expansion joints.
- Protect from rain to avoid expansion before placing new concrete and to assure 100% swelling capacity.
- Avoid placement of the concrete from a height greater than 20 inches. If this is not possible, allow SikaSwell S-2 to cure for 2 days before placing concrete.

**Caution**

Avoid skin and eye contact. Use of NIOSH approved organic vapor respirator, safety goggles, and chemical resistant gloves recommended. Remove contaminated clothing and shoes.

**First Aid**

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact a physician. Wash clothing before re-use. Discard contaminated shoes.

**Clean Up**

Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. For spillage, collect and dispose of in accordance with current, applicable local, state, and federal regulations.

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**SikaSwell S-2 Installation**

2. Cut nozzle to obtain triangular extrusion section (or use nozzle included in carton of SikaSwell S-2).
3. Apply a uniform, continuous bead to hardened concrete. Wait 2 hours before placing new concrete.