# MasterSeal® SL 1™

One-component elastomeric, self-leveling polyurethane sealant

**FORMERLY SONOLASTIC® SL 1™**

## Packaging
- 2 gallon pails (7.6 L)
- 825 ml cartridges, 12 cartridges per carton
- 300 ml cartridges, 30 cartridges per carton and 12 cartridges per carton

## Color
Limestone and Gray

## Yield
See page 3 for charts

## Storage
Store in unopened containers in a cool, clean, dry area. Storing at elevated temperatures will reduce shelf life.

## Shelf Life
- In Bulk: 6 months when properly stored
- Cartridges: 1 year when properly stored

## VOC Content
29 g/L

less water and exempt solvents

## Description
MasterSeal SL 1 is one component, non-priming, self-leveling elastomeric polyurethane designed for expansion joints in concrete floors and decks. Use it where flexibility as well as abrasion and puncture resistance are required.

## Product Highlights
- Movement capability of ±25% allows expansion and contraction with joint movement
- Abrasion resistant to provide for longer wearing and durability
- Easy to gun for quick installation
- Variety of types and sizes of packaging to help reduce jobsite waste
- No priming needed on most surfaces, offering excellent adhesion
- Self-leveling, so no tooling needed
- Wide application temperature range makes MasterSeal SL 1 suitable for all climates
- Excellent weatherability for long-lasting performance

## Substrates
- Concrete
- Metal

## Applications
- Horizontal
- Interior and exterior
- Expansion joints
- Control joints
- Pavers
- Plaza decks
- Industrial floors
- Driveways/garages
- Sidewalks
- Decks
- Parking structures
- Pitch pans

## How to Apply
### Joint Preparation
1. The product may be used in sealant joints designed in accordance with SWR Institute’s Sealants - The Professional’s Guide.
2. In optimal conditions, the depth of the sealant should be ½ the width of the joint. The sealant joint depth (measured at the center) should always fall between the maximum depth of ½” and the minimum depth of ¼”. Refer to Table 1.
3. In deep joints, the sealant depth must be controlled by closed cell backer rod or soft backer rod. Where the joint depth does not permit the use of backer rod, a bond breaker (polyethylene strip) must be used to prevent three-point bonding.
Technical Data

Composition
MasterSeal SL 1 is a single-component polyurethane sealant, which cures by reaction with atmospheric moisture.

Compliances
- ASTM C 920, Type S, Grade P, Class 25, Use T, M, NT, A and O *
- Federal Specification TTS- 00230C, Type 1, Class A
- Corps of Engineers CRD-C-541
- Canadian Specification CAN/CGSB 19.13-M87, Classification C-1-40-B-N and C-1-25-B-N, No. 81028
- CFI accepted
- USDA compliant for use in areas that handle meat and poultry
* Refer to substrates in Where to Use.

Typical Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service temperature range, ° F (° C)</td>
<td>-40 to 180 (-40 to 82)</td>
</tr>
<tr>
<td>Shrinkage</td>
<td>Nil</td>
</tr>
</tbody>
</table>

4. To maintain the recommended sealant depth, install backer rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed cell backer rod should be about \( \frac{1}{8} \) (3 mm) larger in diameter than the width of the joint to allow for compression. Soft backer rod should be approximately 25% larger in diameter than the joint width. The sealant does not adhere to it, and no separate bond breaker is required. Do not prime or puncture the backer rod.

NEW CONCRETE
Remove all loose material from joints by wire brushing. Sandblast surfaces in contact with form-release agents. Fresh concrete must be fully cured. Laitance must be removed by abrading.

OLD CONCRETE
For previously sealed joints, remove all old material by mechanical means. If joint surfaces have absorbed oils, remove sufficient concrete to ensure a clean surface.

PRIMING
1. For most applications, priming is not required; joints subject to periodic water immersion, however, must be primed with MasterSeal P 173. On surfaces other than concrete, conduct a test application to verify adhesion.
2. Apply primer in a thin, uniform film. Avoid buildup of excess primer.
3. Avoid applying primer beyond joint faces. To minimize the contamination of adjacent surfaces, apply masking tape before priming and remove before the sealant has begun to thicken and set.

CURING TIME
The cure of MasterSeal SL 1 varies with temperature and humidity. The following times assume 75° F (24° C), 50% relative humidity, and a joint \( \frac{1}{2} \) width by \( \frac{1}{4} \) depth (13 by 6 mm).
- Skins: overnight or within 24 hours
- Full cure: approximately 1 week
- Immersion service: 21 days

Test Data

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>RESULTS</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement Capability, %</td>
<td>±25</td>
<td>ASTM C 719</td>
</tr>
<tr>
<td>Tensile strength, psi (MPa)</td>
<td>300 (2.1)</td>
<td>ASTM D 412</td>
</tr>
<tr>
<td>Elongation, %</td>
<td>800</td>
<td>ASTM D 412</td>
</tr>
<tr>
<td>Hardness, Shore A</td>
<td>25</td>
<td>ASTM C 661</td>
</tr>
<tr>
<td>Artificial weathering,</td>
<td>Excellent</td>
<td>ASTM G 26</td>
</tr>
<tr>
<td>Xenon arc, 1,000 hrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low temperature flexibility, ° F (° C)</td>
<td>-15 (-26)</td>
<td>ASTM C 793</td>
</tr>
<tr>
<td>Viscosity, poise</td>
<td>325</td>
<td>Brookfield</td>
</tr>
</tbody>
</table>

Test results are typical values obtained under laboratory conditions. Reasonable variations can be expected.

<table>
<thead>
<tr>
<th>TABLE 1 Joint Width and Sealant Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOINT WIDTH, IN (MM)</td>
</tr>
<tr>
<td>¼–½ (6–13)</td>
</tr>
<tr>
<td>½–¾ (13–19)</td>
</tr>
<tr>
<td>¾–1 (19–25)</td>
</tr>
<tr>
<td>1–1½ (25–38)</td>
</tr>
</tbody>
</table>

SURFACE PREPARATION
Substrates must be structurally sound, fully cured, dry and clean. Substrates should always be free of the following: dirt, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing or curing and parting compounds, membrane materials and sealant residue.

APPLICATION
1. Fill joints by pouring the sealant from a spouted container.
2. Fill joints from the bottom; avoid bridging of the joint, which may form air voids. Sealant will self-level to form a clean joint surface.

4. Allow approximately 15–30 minutes drying time before applying sealant (primer should be tack-free). Priming and sealing must be done on the same day.
### Linear Feet Per Gallon*

<table>
<thead>
<tr>
<th>Joint Depth, (Inches)</th>
<th>¼</th>
<th>⅜</th>
<th>½</th>
<th>⅝</th>
<th>¾</th>
<th>1</th>
<th>1½</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>¼</td>
<td>308</td>
<td>205</td>
<td>154</td>
<td>122</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>⅜</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>82</td>
<td>68</td>
<td>58</td>
<td>51</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>½</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>51</td>
<td>44</td>
<td>38</td>
<td>26</td>
<td>19</td>
</tr>
</tbody>
</table>

### Meters Per Liter

<table>
<thead>
<tr>
<th>Joint Depth, (MM)</th>
<th>6</th>
<th>10</th>
<th>13</th>
<th>16</th>
<th>19</th>
<th>22</th>
<th>25</th>
<th>38</th>
<th>50</th>
<th>75</th>
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</thead>
<tbody>
<tr>
<td>6</td>
<td>24.8</td>
<td>16.5</td>
<td>12.4</td>
<td>9.8</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>10</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>6.6</td>
<td>5.5</td>
<td>4.7</td>
<td>4.1</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>13</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>4.1</td>
<td>3.5</td>
<td>3.0</td>
<td>2.2</td>
<td>1.5</td>
<td>0.7</td>
</tr>
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</table>

### Linear Feet Per 825 ML Cartridge

<table>
<thead>
<tr>
<th>Joint Depth, (Inches)</th>
<th>¼</th>
<th>⅜</th>
<th>½</th>
<th>⅝</th>
<th>¾</th>
<th>1</th>
<th>1½</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>¼</td>
<td>72</td>
<td>48</td>
<td>36</td>
<td>28.5</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>⅜</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>19.25</td>
<td>16</td>
<td>13.5</td>
<td>12</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>½</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>12</td>
<td>10.2</td>
<td>8.8</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Linear Meter Per 825 ML Cartridge

<table>
<thead>
<tr>
<th>Joint Depth, (MM)</th>
<th>6</th>
<th>10</th>
<th>13</th>
<th>16</th>
<th>19</th>
<th>22</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>20.5</td>
<td>13.6</td>
<td>10.2</td>
<td>8.1</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>10</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5.4</td>
<td>4.5</td>
<td>3.9</td>
<td>3.4</td>
</tr>
<tr>
<td>13</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>3.4</td>
<td>2.9</td>
<td>2.5</td>
</tr>
</tbody>
</table>
CLEANUP
Clean equipment with MasterSeal 990 or xylene immediately after use and before sealant has cured. Cured sealant may be removed by cutting with a sharp-edged tool, thin films by abrading.

FOR BEST PERFORMANCE
- Do not allow uncured MasterSeal SL 1 to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured MasterSeal NP 150™.
- MasterSeal SL 1 is not intended for continuous water immersion. Contact Technical Service for recommendations.
- Backer rods, joint fillers and bond breakers must be tightly installed to prevent loss of sealant through joint bottoms.
- Joints subject to puncture by high heels or umbrella points require a stiffer or higher density backup material; cork or rigid non-impregnated cane-fiber joint fillers are suitable. Separate materials from the sealant by a non-adhering bond breaker (polyethylene tape).
- High temperatures or humidity may cause uncured material to bubble.
- Sealant may bubble if substrates are not dry or if material is applied too deep.
- Do not use other caulks, sand, or incompressibles as a bottom bed in a joint.
- Do not install when rain is expected before the sealant develops a substantial skin.
- For joint widths over 1½” (38 mm), use MasterSeal SL 2.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

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