

# Sika® MonoTop® 611

One-component, polymer-modified, silica fume enhanced, cementitious pump and pour mortar

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| <b>Description</b>  | Sika® MonoTop® 611 is a 1-component silica fume-enhanced, polymer-modified, portland-cement, mortar.  |
| <b>Where to Use</b> | <ul style="list-style-type: none"><li>■ On grade, above, and below grade on concrete and mortar.</li><li>■ On horizontal, vertical and overhead surfaces.</li><li>■ As a structural repair material for parking facilities, industrial plants, walkways, bridges, tunnels, and dams.</li><li>■ Free-flowing repair mortar for hard-to-reach areas.</li><li>■ Filler for voids and cavities.</li><li>■ For underwater application in conjunction with Sikament® 100SC. Consult Technical Service for dosage information. Independent test data is available however on site testing is recommended to confirm performance under actual field conditions.</li></ul> |
| <b>Advantages</b>   | <ul style="list-style-type: none"><li>■ Superior abrasion resistance over conventional portland cement mortar.</li><li>■ High bond strength.</li><li>■ Compatible with coefficient of thermal expansion of concrete.</li><li>■ Increased resistance to deicing salts.</li><li>■ High early strengths.</li><li>■ Simple-to-use labor-saving system.</li><li>■ Easily mixed.</li><li>■ High compressive and flexural strengths.</li><li>■ Good freeze/thaw resistance.</li><li>■ Easily applied to clean, sound substrate.</li><li>■ Not a vapor barrier.</li><li>■ Not flammable.</li></ul>  |
| <b>Coverage</b>     | Approximately 0.42 cu. ft./unit. Approximately 0.67 cu. ft./unit (50 lbs. of MT 611+42 lbs. 3/8" pea gravel)  |
| <b>Packaging</b>    | 50-lb. multi-wall bag.  |

### 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.

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| <b>Shelf Life</b>                               | 1 year in original, unopened packaging.   |
| <b>Storage Conditions</b>                       | Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.   |
| <b>Color</b>                                    | Concrete gray when mixed.   |
| <b>Mixing Ratio</b>                             | Mix with clean potable water at rate of 1 gallon per bag. Start with 4/5 gallon and temper slowly to consistency required with remainder of gallon.   |
| <b>Application Time</b>                         | Approximately 30 min. after mixing with water. Mortar remains plastic for a longer period, but will have less adhesion after this period of time. Application time is dependent on temperature and relative humidity. |
| <b>Flexural Strength (ASTM C-293)</b>           | <b>28 days</b> 720 psi (5.0 MPa)  |
| <b>Splitting Tensile Strength (ASTM C-496)</b>  | <b>28 days</b> 500 psi (3.4 MPa)  |
| <b>Bond Strength* (ASTM C-882 modified)</b>     | <b>28 days</b> 2,200 psi (15.2 MPa)   |
| <b>Compressive Strength (ASTM C-109)</b>        |   |
| <b>1 day</b>                                    | 3,000 psi (20.7 MPa)  |
| <b>7 days</b>                                   | 5,500 psi (37.9 MPa)  |
| <b>28 days</b>                                  | 6,500 psi (44.8 MPa)  |
| <b>Chloride ion permeability (AASHTO T-277)</b> | < 600 coulombs  |

\* Mortar scrubbed into substrate.

Construction



PRIOR TO EACH USE OF ANY SIKA PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT [HTTP://USA.SIKA.COM/](http://usa.sika.com/) OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800.933.7452 NOTHING CONTAINED IN ANY SIKA MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS FOR EACH SIKA PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.

## How to Use

| <b>Substrate</b>               | Concrete, mortar, and masonry products   |                   |         |         |      |                  |                |          |                |                   |
|--------------------------------|--|-------------------|---------|---------|------|------------------|----------------|----------|----------------|-------------------|
| <b>Surface Preparation</b>     | <p><b>Concrete/Mortar:</b> Remove all deteriorated concrete, dirt, oil, grease, and all bond-inhibiting materials from surface. Be sure repair area is not less than 1/2 inch in depth. Preparation work should be done by high pressure water blast, scabblor, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of <math>\pm 1/16</math> in. (CSP-5). Saturate surface with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.</p> <p><b>Reinforcing Steel:</b> Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult Product Data Sheet).</p>   |                   |         |         |      |                  |                |          |                |                   |
| <b>Priming</b>                 | For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult Technical Data Sheet).   |                   |         |         |      |                  |                |          |                |                   |
| <b>Mixing</b>                  | <p><b>Sika MonoTop mortar:</b> Place 4/5 of 1 gallon water in mixing container. Add Sika® MonoTop® while continuing to mix. Add additional water up to 1 gallon total. Mix to a uniform consistency, maximum 3 minutes. Mechanically mix with a low-speed drill (400-600 rpm) and paddle or in appropriate-size mortar mixer.</p> <p><b>Sika MonoTop concrete:</b> For applications greater than 1 inch in depth, add 3/8-inch coarse aggregate (42-lb./unit) to Sika MonoTop to produce Sika® MonoTop® concrete. Trial mix designs should be conducted to simulate job conditions. The aggregate must be non-reactive (reference ASTM C1260, C227 and C289), clean, well-graded, saturated surface dry, have low absorption, high density, and comply with ASTM C33 size number 8 per Table 2. Mix as above. Introduce aggregate at desired quantity. Mix to uniform consistency, maximum 3 minutes.</p>  |                   |         |         |      |                  |                |          |                |                   |
| <b>Application</b>             | Form and pour or pump applications: Pre-wet surface to SSD. Vibrate form while pouring or pumping. Pump with a variable pressure pump. Continue pumping until a 3 to 5 psi increase in normal line pressure is evident then STOP pumping. Form should not deflect. Vent to be capped when steady flow is evident, and forms stripped when appropriate.   |                   |         |         |      |                  |                |          |                |                   |
| <b>Tooling &amp; Finishing</b> | As per ACI recommendations for portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water based* compatible curing compound. Curing compounds adversely affect the adhesion of following layers of mortar, leveling mortar or protective coatings. Moist curing should commence immediately after finishing. Protect newly applied material from direct sunlight, wind, rain and frost.<br>*Pretesting of curing compound is recommended.  |                   |         |         |      |                  |                |          |                |                   |
| <b>Limitations</b>             | <ul style="list-style-type: none"> <li>■ <b>Application thickness:</b> <table border="1" style="display: inline-table; vertical-align: middle;"> <thead> <tr> <th></th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>Neat</td> <td>1/2 inch (13 mm)</td> <td>1 inch (25 mm)</td> </tr> <tr> <td>Extended</td> <td>1 inch (25 mm)</td> <td>6 inches (150 mm)</td> </tr> </tbody> </table> </li> <li>■ Minimum ambient and surface temperatures 45°F (7°C) and rising at time of application.</li> <li>■ Addition of coarse aggregates may result in variations of the physical properties of the mortar.</li> <li>■ Do not use a solvent-based curing compound.</li> <li>■ Product is not designed for unconfined placements or overlays (use SikaTop® 111 PLUS).</li> <li>■ As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® Hi-Mod 32.</li> </ul> |                   | Minimum | Maximum | Neat | 1/2 inch (13 mm) | 1 inch (25 mm) | Extended | 1 inch (25 mm) | 6 inches (150 mm) |
|                                | Minimum  | Maximum           |         |         |      |                  |                |          |                |                   |
| Neat                           | 1/2 inch (13 mm)   | 1 inch (25 mm)    |         |         |      |                  |                |          |                |                   |
| Extended                       | 1 inch (25 mm)   | 6 inches (150 mm) |         |         |      |                  |                |          |                |                   |

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