



Sika MonoTop® 611

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

Description	Sika MonoTop 611 is a 1-component silica fume-enhanced, polymer-modified, portland-cement, mortar.
Where to Use	<ul style="list-style-type: none"> ■ On grade, above, and below grade on concrete and mortar. ■ On horizontal, vertical and overhead surfaces. ■ As a structural repair material for parking facilities, industrial plants, walkways, bridges, tunnels, and dams. ■ Free-flowing repair mortar for hard-to-reach areas. ■ Filler for voids and cavities. ■ Leveling mortar.
Advantages	<ul style="list-style-type: none"> ■ Superior abrasion resistance over conventional portland cement mortar. ■ High bond strength. ■ Compatible with coefficient of thermal expansion of concrete. ■ Increased resistance to deicing salts. ■ High early strengths. ■ Simple-to-use labor-saving system. ■ Easily mixed. ■ High compressive and flexural strengths. ■ Good freeze/thaw resistance. ■ Easily applied to clean, sound substrate. ■ Not a vapor barrier. ■ Not flammable, non-toxic.
Yield	Approximately 0.42 cu. ft./unit. Approximately 0.67 cu. ft./unit (50 lbs. of MT 611+42 lbs. 3/8" pea gravel)
Packaging	50-lb. multi-wall bag.

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

Shelf Life	1 year in original, unopened packaging.
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.
Color	Concrete gray when mixed.
Mixing Ratio	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.
Application Time	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.
Flexural Strength (ASTM C-293)	28 days 720 psi (5.0 MPa)
Splitting Tensile Strength (ASTM C-496)	28 days 500 psi (3.4 MPa)
Bond Strength* (ASTM C-882 modified)	28 days 2,200 psi (15.2 MPa)
Compressive Strength (ASTM C-109)	
1 day	3,000 psi (20.7 MPa)
7 days	5,500 psi (37.9 MPa)
28 days	6,500 psi (44.8 MPa)
Chloride ion permeability (AASHTO T-277)	< 600 coulombs

* Mortar scrubbed into substrate.

How to Use

Substrate	Concrete, mortar, and masonry products
Surface Preparation	Concrete/Mortar: 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 ±1/16 in. (CSP-5). Saturate surface with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.



Reinforcing Steel: 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 Technical Data Sheet).

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Mixing	<p>Sika MonoTop mortar: 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>Sika MonoTop concrete: 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>									
Application & Finish	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.									
Curing	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. *Pretesting of curing compound is recommended.									
Limitations	<table border="1"> <thead> <tr> <th>Application thickness:</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> <ul style="list-style-type: none"> Minimum ambient and surface temperatures 45°F (7°C) and rising at time of application. Addition of coarse aggregates may result in variations of the physical properties of the mortar. Do not use a solvent-based curing compound. Product is not designed for unconfined placements or overlays (use SikaTop 111 PLUS). 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. 	Application thickness:	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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Caution	<p>Irritant Suspect carcinogen - Contains portland cement and sand (crystalline silica). Skin and eye irritant. Avoid contact. Dust may cause respiratory tract irritation. Avoid breathing dust. Use only with adequate ventilation. May cause delayed lung injury (silicosis). IARC lists crystalline silica as having sufficient evidence of carcinogenicity in laboratory animals and limited evidence of carcinogenicity in humans. NTP also lists crystalline silica as a suspect carcinogen. Use of safety goggles and chemical resistant gloves is recommended. If PELs are exceeded, an appropriate, NIOSH approved respirator is required. Remove contaminated clothing.</p>									
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, and contact a physician. For respiratory problems, remove person to fresh air.									
Clean Up	In case of spillage, scoop or vacuum into appropriate container, and dispose of in accordance with current, applicable local, state and federal regulations. Keep container tightly closed and in an upright position to prevent spillage and leakage. Mixed components: Uncured material can be removed with water. Cured material can only be removed mechanically.									

KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY

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