

Sika MonoTop 615

One-component, polymer-modified, silica fume enhanced, lightweight, non-sag mortar

Description	Sika MonoTop 615 is a one-component, polymer-modified, silica fume enhanced, cementitious, non-sag mortar. It is a multi-purpose mortar which can be applied by trowel or low pressure wet spray process.
Where to Use	<ul style="list-style-type: none"> ■ On buildings, facades, and balconies. ■ On grade, above, and below grade on concrete and mortar. ■ On vertical, overhead, and horizontal surfaces. ■ As a general purpose repair mortar for use on concrete structures in a mild or moderate service environment.
Advantages	<ul style="list-style-type: none"> ■ One component, factory controlled for consistent quality. ■ To be mixed with potable water only. ■ Excellent workability. ■ Adjustable consistency. ■ Excellent thixotropic behavior, especially suitable for overhead and vertical application. ■ Good mechanical strengths. ■ High bond strength ensures excellent adhesion. ■ Increased freeze/thaw durability and resistance to deicing salts. ■ Compatible modulus of elasticity to concrete generally used for building/facade construction. ■ Compatible with coefficient of thermal expansion of concrete - Passes ASTM C-884 (modified). ■ Application by hand or low pressure wet spray method. ■ Not a vapor barrier. ■ Not flammable, non-toxic.
Yield	0.55 cu. ft./bag.
Packaging	50 lb. multi-wall bag.

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

Shelf Life	One 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	3.5 qts. (±0.25 qts.) of water per 50 lb. bag as required for desired consistency, (water: powder ratio = 0.146:1).
Application Time	Approximately 45 min. after adding water. Application time is dependent on temperature and humidity.
Finishing Time	Approximately 60 min. after adding water: depends on temperature, relative humidity, and type of finish desired.
Density (wet mix)	104 lbs./cu. ft. (1.65 kg./l)
Flexural Strength (ASTM C-293):	28 days 1,000 psi (6.9 MPa)
Splitting Tensile Strength (ASTM C-496):	28 days 400 psi (2.8 MPa)
Bond Strength* (ASTM C-882 modified):	28 days 1,000 psi (6.9 MPa)
Compressive Strength (ASTM C-109):	
1 day	1,500 psi (10.3 MPa)
7 days	3,500 psi (24.1 MPa)
28 days	4,300 psi (29.7 MPa)
Carbon Dioxide Diffusion Coefficient (μ CO₂)	1,300
Water Vapor Diffusion Coefficient (μ H₂O)	300

*Mortar scrubbed into substrate.



How to Use

Substrate	Concrete, mortar, and masonry products.
Surface Preparation	<p>Concrete / Mortar: Remove all deteriorated concrete, dirt, oil, grease, and all bond-inhibiting materials from surface. Be sure repair area is not less than 1/8 in. in depth. Preparation work should be done by high pressure water blast (over 20,000 psi), scabber, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of $\pm 1/16$ in. (CSP-5). Saturate surface with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.</p> <p>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 Top Armatec 110 EpoCem (consult Technical Data Sheet).</p>
Priming	Concrete Substrate: Prime the prepared substrate with a brush or sprayed applied coat of Sika Armatec 110 EpoCem (consult Technical Data Sheet). Alternately, a scrub coat of Sika MonoTop 615 can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.
Mixing	Pour water in the proper proportion (3.5 qts. ± 0.25 qts. per bag) into the mixing container. Add powder while mixing continuously. Mix mechanically with a low-speed drill (400-600 rpm) and mixing paddle or mortar mixer. Mix to uniform consistency, minimum 3 minutes. Manual mixing can be tolerated only for less than a full bag.
Application & Finish	<p>Sika MonoTop 615 can be applied either by hand or wet spray process equipment. Mortar must be scrubbed into the substrate, filling all pores and voids; or the use of a bonding agent (Sika Armatec® 110) is recommended. Force Sika MonoTop 615 against edge of repair, working toward the center.</p> <p>After filling repair, consolidate, then screed. Material may be applied in multiple lifts. The thickness of each lift, not to be less than 1/8 in. minimum or more than 2 in. maximum, may vary depending on the conditions of the repair area. Where multiple lifts are required, score top surface of each lift to produce a roughened surface for next lift. Allow preceding lift to set before applying fresh material. Saturate surface of the lift with clean water. Scrub fresh mortar into preceding lift. Allow mortar to set to desired stiffness, then finish with wood or sponge float for a smooth surface, or texture as required.</p>
Curing	<p>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.</p> <p>*Pretesting of curing compound is recommended.</p>
Limitations:	<ul style="list-style-type: none"> ■ Application thickness: Minimum 1/8 inch; Maximum in one lift; Vertical/Horizontal - 2 inches; Overhead - 1.5 inches ■ Minimum ambient and surface temperatures 45°F and rising at time of application. ■ Do not use solvent-based curing compound. ■ 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.
Caution	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, properly fitted NIOSH approved respirator is required. Remove contaminated clothing.
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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