

Sika MonoTop[®]-615LS

High Build Repair Mortar

Construction

Description	Sika MonoTop-615LS is a cementitious polymer and Silica Fume modified, lightweight, shrinkage compensated repair and patching mortar.
Uses	<p>As a repair mortar on concrete structures affected by spalling due to corroding reinforcement.</p> <p>As a concrete patching and reprofiling mortar for the treatment of:</p> <ul style="list-style-type: none"> ▪ Honeycombing and voids caused by faulty formwork. ▪ Broken upstands, ribs, edges, etc. on architectural units. ▪ Break outs for service entrances in walls and slabs etc. <p>For use in conjunction with the Sika concrete repair system:</p> <ul style="list-style-type: none"> ▪ SikaTop-110 EpoCem Bonding Mortar and Reinforcement Protection. ▪ Sika MonoTop-615LS Patching Mortar. ▪ Sika MonoTop-620 Fairing Coat.
Advantages	<ul style="list-style-type: none"> ▪ Shrinkage compensated (<500 microstrains @ 28 days). ▪ Lightweight, high build. ▪ Easily applied and worked. ▪ Adjustable consistency to suit application. ▪ Non-sagging in vertical and overhead work. ▪ Layers of up to 80 mm in one application are possible on vertical surfaces. ▪ Compatible with the thermal expansion properties of concrete. ▪ Free from chlorides. ▪ Non-corrosive to reinforcing steel. ▪ Non-toxic.
Storage and Shelf Life	Stored in the original sealed packaging in dry conditions, this product will keep for at least nine (9) months.
Instructions for Use	
Surface Preparation	<p>Correct and thorough surface preparation is essential to achieve the high adhesive qualities of Sika MonoTop mortars.</p> <p>All surfaces must be clean, sound and free from dust, ice, oils, grease or other surface contaminants such as curing membranes and form release agents etc.</p> <p><i>Concrete, Mortar, Stone:</i> Mechanically abrade the surface with a needle gun, mechanical wire brush, grind, grit or water blast. All surface laitance must be removed.</p> <p>The strength of the concrete or mortar substrate should be at least 20MPa.</p> <p>The prepared substrate should be thoroughly soaked with clean water until uniformly saturated, leaving no standing water, ie. Saturated Surface Dry (SSD) condition.</p>
Bonding Bridge	To the prepared substrate apply Sika MonoTop-610 or SikaTop-110 EpoCem as a bonding bridge in accordance with the instructions on the Technical Data Sheet.

**Bonding Bridge
(continued)**

In some circumstances alternate bonding bridge material may be preferable eg. Sikadur-32; please consult Sika's Technical Department for further information.

In all cases the bonding bridge must be tacky at the time of applying Sika MonoTop-615LS, ie. wet on wet application.

Mixing

Sika MonoTop-615LS should be mechanically mixed in a forced action mixer or in a clean drum using a low speed drill and spiral mixer (max. 500rpm).

Pour 90% of the recommended water content into the mixing vessel, slowly add the powder while continuing to mix. Continue mixing until a uniform homogenous consistency is achieved (minimum 3 minutes) then add the remaining water until the desired application consistency is obtained.

If Sika MonoTop-615LS begins to stiffen within a few minutes of mixing, it may be necessary to remix the mortar to regain a smooth, workable mix.

Note that the recommended water addition of 2.9 litres per 20kg bag can be adjusted by plus or minus 10% to achieve the desired application necessary.

Application

Sika MonoTop-615LS must be applied wet on wet to the substrate previously primed with Sika MonoTop-610, SikaTop-110 EpoCem or Sikadur-32. Work the mortar well into the substrate, using a placing rather than a rendering technique to fill all pores and voids. Compact well.

Force material against the edge of the repair, working towards the centre.

For repairs in excess of 80 mm deep, apply in layers ensuring previous layers are well keyed and hardened.

Application of a bonding bridge between layers is recommended to ensure optimum bond.

Finishing

When the applied mortar has stiffened, but not dried, various methods may be employed to obtain the desired surface finish, eg. steel trowel, wooded float, styrofoam block or sponge.

The addition of water to the surface to obtain the desired finish is not recommended as this may cause colour variations and surface cracking.

Where Sika MonoTop-615LS is to be overcoated with a fairing mortar (eg. Sika MonoTop-620) or protective coating (eg. Sikagard-680S) the surface should be finished to provide a fine gripping texture.

Cleaning

Remove soft Sika MonoTop-615LS from tools and equipment with water. Hardened material can only be removed mechanically.

Curing

Suitable curing methods as per the Concrete Institute's recommended practice, such as plastic sheet, wet hessian, liquid membrane (eg. Sikagard-680S (Finish) or Antisol curing compounds) must be used to protect the freshly applied mortar from the drying effects of sun and wind.

Technical and Physical Data

Form Lightweight, smooth mortar

Granulometry 0-1.5 mm

Density 1.45 kg/litre approx. (fresh wet density)

Yield 16 litres of mixed mortar per 20kg bag (approx.)

Mixing ratio Water : Powder

1 : 6.9 by mass

2.9 litres : 20kg

Note that the water addition rate can be adjusted by a $\pm 10\%$ to achieve the desired application consistency.

Potlife @ 20°C 50 minutes approximately

Application Thickness Minimum 5 mm

Maximum 80 mm

Application Temperature +5 °C - +35 °C (substrate and ambient temperature)

+5 °C - 25 °C (mortar temperature)

Compressive strength (AS 1012)	24 hours 4.0 MPa 7 days 17.0 MPa (wet cured) 28 days 28.0 MPa (wet cured)
Flexural Strength (AS 1012)	6.5 MPa approx. at 28 days
Equivalent Air Layer Thickness (R):	>50 m @ 80 mm thickness
Colour	Light Grey
Packaging	20kg bag
Important Notes	<ul style="list-style-type: none"> ▪ Apply only to clean sound substrates. ▪ Never apply to dry substrates. ▪ In warm, hot or windy conditions ensure adequate curing of freshly applied mortar. ▪ Sika MonoTop-615LS mortar will not bridge live cracks. ▪ Sika MonoTop-615LS has various uses which may necessitate adjusting the consistency slightly to better suit the particular application. A reduction of up to 10% of either the powder or water is permissible to either stiffen or increase workability of the mixed mortar. ▪ Not suitable as an adhesive for ceramic wall tiles. ▪ Refer to Sika's Technical Department for a full concrete repair and protection system.
Handling Precautions	<ul style="list-style-type: none"> ▪ Avoid contact with the skin. ▪ Protective gloves and clothing are recommended when mixing or using this product. ▪ A full Material Safety Data Sheet is available from Sika on request.
Important Notification	<p>The information, and, in particular, the recommendations relating to the application and end-use of Sika's products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.</p> <p>PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.</p>

