

## PRODUCT DATA SHEET

## Sika® Icoment®-520

2-component, polymer-modified, thin layer levelling mortar for concrete protection and repairs

## DESCRIPTION

Sika® Icoment®-520 is a hydraulic setting, 2-component PCC mortar. The liquid component A consists of a specially developed polymer dispersion. The powder component B contains hydraulic binders and mineral fillers.

An easily applied levelling mortar is produced by adding water to achieve the desired consistency. Sika® Icoment®-520, powder component B, is low-chromate according to TRGS 613 [German Regulations for Hazardous Substances].

## USES

For the levelling and repair of minor surface defects in concrete surfaces, including surfaces under water and in splash-zones (e.g. swimming pools, water treatment plants etc.); also for the filling sealing of surface voids and defects such as blowholes etc..

Levelling and smoothing with Sika® Icoment®-520 is carried out by thin-layer trowel application process. Formwork profiles can be largely removed. Particularly suitable for surface levelling and protection in concrete repair works.

## FEATURES

- Very good adhesion even on critical substrates
- Short curing treatment
- Adhesives firmly to the substrate in thin layers
- Machine and manual application
- Provides an ideal substrate for protective coatings
- Fine surface filler for OS systems according to DIN V 18026
- Low E-modulus, low surface stress

## CERTIFICATES AND TEST REPORTS

- The system is listed in the compilation of certified substances and substance systems according to ZTV-ING, Part 3, Section 4.
- Certified for use on Sika MonoTop®-600 by report no. P-5004/4353-MPA BS, also for use on Sika MonoTop®-PCC-System by report no. P-5103/438/13 –MPA BS; Materials Testing Institute for Building, Braunschweig Technical University (IBMB MPA TU Braunschweig).

## PRODUCT INFORMATION

Packaging	25 kg units
Appearance and colour	grey
Shelf life	1 year from date of production
Storage conditions	Store in undamaged, unopened, original sealed packaging in cool and dry conditions. Keep away frost and protect from damp.
Density	1.84 kg/l of fresh mortar
Maximum grain size	0.5 mm

## TECHNICAL INFORMATION

Compressive strength	ca. 40 N/mm <sup>2</sup>
Flexural-strength	ca. 10 N/mm <sup>2</sup>
Tensile strength	Pull-off strength ~2 N/mm <sup>2</sup>

## APPLICATION INFORMATION

Mixing ratio	component A : component B : water = 16 : 84 : 8 by weight. 25 kg unit: 4 kg component A + 21 kg component B + max. 2 litres water.		
Consumption	~1.9 kg/m <sup>2</sup> /mm of mixed mortar. Equivalent to a material consumption of Sika® Icoment®-520, components A+B, of 1.76 kg/m <sup>2</sup> /mm.		
Layer thickness	Max. 3 mm per layer		
Ambient air temperature	Minimum +5 °C Maximum +35 °C		
Substrate temperature	Minimum +5 °C Maximum +35 °C		
Pot Life	<b>+5 °C</b> approx. 2 hours	<b>+20 °C</b> approx. 1 hour	<b>+35 °C</b> approx. 0.5 hours
The correct consistency for application is restored by simply stirring the Sika® Icoment®-520 within the above time limits and without adding more water.			
Waiting time to overcoating	<b>Operation</b>	<b>Waiting time approx.</b>	
	repair mortar	24 hours	
	1st operation, pre-filling (levelling, pore sealing)		
	1st operation, pre-filling	24 hours	
	2nd operation, pre-filling		
	2nd operation, coating	4 days	

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## FURTHER DOCUMENTATION

### DEWPOINT:

The substrate temperature must be min. min. + 3°C above the dew point during application and hardening. Protect freshly applied material from condensation.

## ECOLOGY, HEALTH AND SAFETY

### CE-MARK:

See Declaration of Performance

### HEALTH & SAFETY:

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

# APPLICATION INSTRUCTIONS

## SUBSTRATE QUALITY / PRE-TREATMENT

The concrete substrate must be clean, free from loose and friable particles, dust and dirt, any traces of formwork release agents, particularly if they contain oil or wax, plus any cement laitance on the surface must be completely removed (according to guidelines of ZTV-ING, part 3, section 4). The concrete surface must be prepared by compressed air blasting with solid blasting medium or high-pressure water blasting (minimum 400 bar) until the concrete substrate has a tensile strength of  $\geq 1.3 \text{ N/mm}^2$ .

If future underwater or splash-zone exposure is intended, always prepare the concrete substrate by blast cleaning to ensure removal of cement laitance and fully expose any surface voids and blowholes etc. The concrete substrate must be damp before and throughout application; pre-wet it thoroughly before applying the Sika® Icoment®-520.

For sand-lime brick, it is mandatory to prime the substrate with Sikagard®-552 W AquaPrimer.

## MIXING

Sika® Icoment®-520 is already supplied in the correctly packaged quantity ratio, only the required water still has to be added. The Component A (= liquid part) is stirred or shaken well. A mixing liquid is prepared by adding approx. 1.8 l water (approx. 90 % of the max. water). Component B (powder) is added to this liquid while mixing continuously. Mix powerfully and intensively with a mixer until an evenly homogeneous mixture is obtained. The powder component must be evenly wetted; dry, non-wetted powder residues should not remain. Adjustment for processing is made by adding the remaining amount of water in portions (this also washes out the dispersion container at the same time). This volume should not be exceeded under any conditions. A slight stiffening during the curing phase of the material will benefit during the application. Sika® Icoment®-520 must not be mixed with any additives.

## APPLICATION

Sika® Icoment®-520 is applied using plastering/rendering techniques, with trowels, floats, scrapers etc. on a pre-saturated, damp substrate. A simple method of pre-saturating and keeping moist for curing is to use a garden sprayer. Any larger or deep holes / voids should be pre-filled with the Sika® Icoment®-520 or another suitable Sika repair mortar and then levelled. Two operations are generally advisable for the application of Sika® Icoment®-520:

1st operation: Levelling of the concrete substrate

2nd operation: Application of a uniform protective layer.

The maximum layer thickness per operation is 3 mm.

Application in several layers is possible with careful dampening of each preceding substrate layer. Only finish the final layer to a smooth, dense surface.

If layer thicknesses over 3 mm need to be applied in one operation, the Sika® Icoment®-520 powder component must be pre-mixed with about 25 % by weight of quartz sand, preferably of granulometry 0.7-1.2 mm. Never apply layer thicknesses above 5 mm in one operation. Always use the Sika® Icoment®-520 as supplied for the final application.

As soon as the final layer begins to harden and stiffen evenly, a fine-grained finish similar to sandpaper should be produced with a suitable sponge or wood float.

No additional water must be added during this finishing process, if tools are cleaned with water during application, then this must be squeezed out or wiped off before re-using them on the surface.

For larger areas, Sika® Icoment®-520 can be wet spray applied without changing the mixing ratio, but care must be taken to prevent the material from overheating in the hopper or lines. Spray application is not possible with material temperatures  $\geq 25^\circ\text{C}$ . Do not exceed the maximum layer thickness. Smooth and finish as usual. Mechanical spray application does not affect the stated technical data.

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**For spray application (up to max. 25 °C):**

Wet spray equipment with screw pumps that have variable gearing are recommended; this is so that the delivery rate can be adjusted to suit the application and environmental conditions. Examples of suitable spray equipment include the Putzmeister texture spray machine, the PFT decorative plaster spray machine, and the Wagner injection wand, or other similar machines of the same type, with a 6 mm nozzle.

For optimum spray atomisation we recommend that the spray pumps should have an air compressor with an output of 2.5 m<sup>3</sup>/min., providing an oil and water free air supply.

Our application equipment recommendations are based on tests with the stated machines. As these machines are not manufactured and sold by Sika and may be differently configured and/or equipped and/or modified, these recommendations cannot replace the user's own research and testing to confirm their suitability before application. Sika cannot accept any liability for any unsuccessful use of the machines.

**CURING TREATMENT**

Sika® Icoment®-520 leveling filler hardens more slowly than normal cement mortar. Rapid drying, e.g. due to sun or strong air movement, must be prevented, therefore the rules for curing mortars must be followed.

Protect freshly prepared surfaces by covering them with mats or plastic sheets. Better: Spray fully with water several times a day. Curing must be done for at least 3-4 days, to achieve optimum surface strength.

Sika® Icoment®-520 leveling filler must be overcoated with coating materials suitable for alkaline substrates: Sikagard®-680 S Betoncolor, Sikagard®-675 W Elast-oColor, Sikagard®-555 W Elastic, Sikagard® Wallcoat T or Sikagard®-260 WPU. According to DIN EN 1504-3, Sika® Icoment®-520 must not be used without carbonation protection.

When building up a surface protection system according to DIN EN 1504-2, the curing times must be observed according to the test certificate.

**CLEANING OF EQUIPMENT**

Fresh mortar on tools and equipment can be cleaned with water. Hardened mortar can only be removed mechanically.

**LOCAL RESTRICTIONS**

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

**LEGAL NOTES**

The information, and, in particular, the recommendations relating to the application and end-use of Sika 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 accordance with Sika's recommendations. 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 user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

**Sika Deutschland CH AG & Co KG**

Kornwestheimer Straße 103 - 107

D - 70439 Stuttgart

Tel.: +49 711 8009-0

Fax: +49 711 8009-321

info@de.sika.com

www.sika.de

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