

PRODUCT DATA SHEET

SikaEmaco® N 5200

(formerly MEmaco N 5200)

Universal, fast setting, polymer modified, fibre reinforced repair and levelling mortar from 3 to 100 mm thickness

PRODUCT DESCRIPTION

SikaEmaco® N 5200 is a universal, one component, polymer modified, fast setting repair, reprofiling and levelling mortar that meets the requirements of class R2 according to EN 1504-3.

SikaEmaco® N 5200 is a ready-to-use material that contains sulphate resistant cement (HSR LA), hydraulic binders, well graded sands, carefully selected polymers and fibres to improve physical and application properties. Applied nanotechnology has been used to significantly reduce shrinkage.

When mixed with water, it forms a highly thixotropic mortar that can easily be hand or trowel applied in thicknesses from 3 up to 100 mm in one layer.

USES

SikaEmaco® N 5200 can be applied inside and outside, on horizontal, vertical and overhead surfaces, in dry and wet environments.

SikaEmaco® N 5200 is used for the non-structural repair of concrete elements such as:

- Balconies edges
- Building facades
- Parapet walls
- Precast panels
- Beam edges

PRODUCT INFORMATION

Packaging	SikaEmaco® N 5200 is available in 20 kg paper bags.
Shelf Life	12 months after date of production if stored at below mentioned storage conditions.
Storage Conditions	Store at ambient temperatures, out of direct sunlight, in cool, dry warehouse conditions and clear of the ground on pallets protected from rainfall prior to application. No permanent storage over +30 °C.

CHARACTERISTICS / ADVANTAGES

- Formulated with nanotechnology to minimise shrinkage and crack tendency.
- Superb application properties and feel on the trowel.
- Smooth, creamy but non-slump mortar.
- Excellent high build capacity - can be applied 80 - 100 mm in horizontal or vertical applications in one layer, or even 70 – 80 mm overhead.
- Easy to create profiles and corners without form-work.
- Can be used as cosmetic and patch repair mortar in one.
- It can be overcoated in only 4 hours (at +20 °C)
- Good strength development exceeding the requirement of class R2 according to EN 1504-3
- Low modulus of elasticity.
- Basically self-curing

ENVIRONMENTAL INFORMATION

SikaEmaco® N 5200 contains 5% by weight of post-consumer material recycled content from the normal recovery of raw materials in manufacturing processes.

Appearance / Colour	Grey powder	
Maximum Grain Size	1.0 mm	
Total Chloride Ion Content	≤ 0.03 %	(EN 1015-17)

TECHNICAL INFORMATION

Compressive Strength	1 day	≥ 10 N/mm ²	(EN 12190)
	28 days	≥ 30 N/mm ²	
	Data determined at +21 °C.		
Modulus of Elasticity in Compression	approx. 12,000 N/mm ²		(EN 13412)
Tensile adhesion strength	Adhesion to concrete after 28 days	≥ 1.8 N/mm ²	(EN 1542)
	Adhesion to Concrete after freeze-thaw (50 cycles with salt)	≥ 1.7 N/mm ²	(EN 13687-1)
	Adhesion to Concrete after thunder-shower (50 cycles)	≥ 1.9 N/mm ²	(EN 13687-2)
	Adhesion to Concrete after dry cycling (50 cycles)	≥ 1.9 N/mm ²	(EN 13687-4)
Shrinkage	No cracking up to 180 days		
Ring test	No cracking up to 180 days		
Capillary Absorption	≤ 0.5kg•m ⁻² •h ^{-0.5}		(EN 13057)
Freeze Thaw De-Icing Salt Resistance	Freeze – Thaw Scaling (56 cycles)	< 0.20 kg/m ² (= classification: "good")	
Reaction to Fire	Class A1		(EN 13501-1)

APPLICATION INFORMATION

Fresh mortar density	Approx. 1.9 kg/l
Consumption	Approx. 1,600 kg powder is needed to prepare 1 m ³ of fresh mortar. One 20 kg bag will yield approximately 12.5 litres of mortar.
Layer Thickness	3 to 100 mm
Ambient Air Temperature	+5 °C to +30 °C
Mixing Ratio	3.5 to 4.0 l mixing water per 20kg bag.
Substrate Temperature	+5 °C to +30 °C
Pot Life	30 to 45 minutes*
Initial set time	45 to 75 minutes*
Final set time	60 to 120 minutes* * Measured at 21±2 °C and 60±10% relative humidity. Higher temperatures will reduce these times and lower temperatures will extend them.
Waiting Time / Overcoating	4 hours with vapour-open coatings (at +20 °C).

VALUE BASE

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

LIMITATIONS

- Do not apply SikaEmaco® N 5200 at temperatures below +5 °C nor above +30 °C.
- Do not add cement, sand or other substances that could affect the properties of SikaEmaco® N 5200.
- Never add water or fresh mortar to a mortar mix which has already begun to set.
- Keep the mixing water ratio between the recommended limits.
- Protect the freshly applied material against rainfall for minimum 24 hours.

ECOLOGY, HEALTH AND SAFETY

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Concrete must be fully cured, clean and sound to ensure good adhesion. All loose traces of concrete or mortar, dust, grease oil, etc. must be removed. Damaged or contaminated concrete should be removed to obtain a keyed surface. Non-impact/vibrating cleaning methods, e.g. shot blasting, sandblasting or high-pressure water jetting are recommended. Aggregate should be clearly visible on the surface of the concrete structure after surface preparation. Cut the edges of the repair vertically to a minimum depth of 3 mm.

If reinforcing steel is visible, clean to a minimum grade of Sa 2 according to ISO 8501-1 / ISO 12944-4. Ensure back of rebar is also clean. Apply 2 coats of SikaEmaco® P 5000 AP on the prepared reinforcement.

The prepared substrate should be pre-soaked, preferably for 24 hours, but at least 2 hours before applying SikaEmaco® N 5200. The surface must be mat-damp, but without standing water.

MIXING

Pour the minimum amount of mixing water into a clean vessel. Mixing water needed: 3.5 to 4.0 litres per 20 kg bag depending upon consistency required. Only use clean uncontaminated water.

Add the SikaEmaco® N 5200 powder rapidly and continuously and mix with a suitable paddle attached to a powerful, slow speed electric drill (max. 400 rpm) for 3 minutes until plastic consistency is achieved without any lump in the mortar.

Allow the mortar to rest for 2 - 3 minutes and then remix briefly, adjusting the consistency when required. Only in exceptional conditions (e.g. hot climate) remix the mortar within its pot life when early stiffening occurs.

APPLICATION

For optimum curing of the product the temperatures during application of SikaEmaco® N 5200 must be between +5 °C and +30 °C.

First apply a thin scrape coat directly to the prepared damp substrate. Then apply SikaEmaco® N 5200 wet on wet up to the required thickness. SikaEmaco® N 5200 can be hand or trowel applied between 3 to max. 100 mm thickness.

Smoothing with a trowel or finishing by float or sponge can be done as soon as the mortar has begun to stiffen, typically after approximately 45 to 60 minutes at 20°C.

CURING TREATMENT

SikaEmaco® N 5200 is basically self-curing. In case dry, hot and windy conditions protect the freshly applied mortar for at least 4 hours.

Protect the freshly applied material against rainfall for minimum 24 hours.

CLEANING OF TOOLS

Tools and mixer must be cleaned immediately after use with water. Cured material can only be removed mechanically.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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.

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