

PRODUCT DATA SHEET

SikaEmaco[®]-141

(formerly MEmaco 141)

SBR polymer-based cement modifier for site-batched waterproof slurry, bonding slurry & render/screed

DESCRIPTION

SikaEmaco[®]-141 is a milky-white, Styrene- Butadiene co-polymer latex liquid, produced from styrene and butadiene by high pressure emulsion polymerisation. SikaEmaco[®]-141 is specifically designed for use with cement compositions. It is used in mortar and concretes as a polymer modifier to increase resistance to water penetration, improve abrasion resistance and durability. It is used with cement as a reliable water-resistant bonding agent

USES

Typical applications include:

- Concrete Repair: Spalled concrete, repairing floors, beams and pre-cast slabs.
- Floor Screeds and Toppings: Abrasion resistant and non-dusting floors.
- External Rendering: Waterproof, weatherproof and frost resistant render.

- Waterproofing and Tanking: Basements, lift pits, inspection pits, water towers, liquid tanks, effluent tanks and swimming pools.
- Other Typical Applications: Bedding tiles, fixing or re-fixing slip bricks.

CHARACTERISTICS / ADVANTAGES

- Mortar improver - Improved flexibility, no bleeding, lower water cement ratio and high resistance to water penetration.
- Improves physical properties – higher abrasion resistance, good adhesion to building materials similar thermal characteristics to concrete.
- Suitable for contact with potable water.

APPROVALS / STANDARDS

WRC certification for suitability for contact with potable water.

PRODUCT INFORMATION

Packaging	SikaEmaco [®] -141 is supplied in 5, 20 & 210 kg.
Shelf Life	12 months from date of production if stored in unopened, undamaged and original sealed packaging.
Storage Conditions	Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment
Appearance / Colour	A milky, white styrene butadiene copolymer latex, specifically made for use with Portland cement.
Specific gravity	1.020 ± 0.01 at 25°C
pH-Value	8 ± 1

TECHNICAL INFORMATION

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Mortar mix design

Mortar proportioning	
Cement	50 Kg
Quartz Sand (Zone II)	150 Kg
MasterEmaco 141	10 Kg
Water	10 Litre
Mortar Properties	
Fresh wet density	2000 ~ 2200 Kg/m ³
Compressive strength*	up to 30 N/mm ²
Flexural strength*	up to 13 N/mm ²
Tensile strength*	up to 6.5 N/mm ²
Freeze thaw resistance	Excellent.
Adhesion	Excellent to concrete, steel, brick, glass, etc.
Resistance to water under pressure (30m head)	Excellent - no water through a 15mm thick test piece.

Yield

Approximately 20 kg of SikaEmaco®-141 mixed with 50 kg of cement & 25 Kg of fine quartz sand, will give slurry which will cover 30 m² of substrate dependent on surface texture and thickness applied.

BASIS OF PRODUCT DATA

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.

ECOLOGY HEALTH AND SAFETY

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

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Remove all laitance, oil, grease, mould oil or curing compound from concrete surfaces using wire brush, scabblers or other equipment as appropriate. Ensure that reinforcing steel is clean and free from grease or oil; remove scale and rust. When repairing spalled or damaged concrete, ensure that the concrete has been cut back to sound material.

SUBSTRATE QUALITY / PRE-TREATMENT

Wet down absorbent surfaces, such as concrete, brick, stone, etc., ensuring that they are saturated but free of surface water.

MIXING

Prepare a bonding slurry of 1½ to 2 parts cement to 1 part SikaEmaco®-141 by volume, mixed to a lump-free creamy consistency. Using a stiff brush, work the bonding slurry well into the damp surface, ensuring

that no pinholes are visible.

(Approximately 20kg of SikaEmaco®-141 mixed with 50kg of OPC cement will give creamy slurry which will cover 20 square metres of substrate dependent on surface texture and thickness applied.)

Always use fresh, cool cement and sharp, clean, well graded aggregate, free of excessive fines.

Mixing should preferably be carried out in an efficient concrete mixer - where available a pan type mixer, such as a Crete angle, is recommended. Hand mixing is only permissible when the total weight of the mix is less than 25kg. Charge the mixer with the required quantity of sand and cement and premix for approx. 1 minute. Add the SikaEmaco®-141 and mix for 2 minutes only, to avoid excessive air entrapment. Finally, without delay, add the water slowly until the required consistency is achieved. Owing to the strong plasticising properties of SikaEmaco®-141 rapid thinning can occur - avoid adding excessive water. Until the user becomes familiar with its workability the appearance of a SikaEmaco®-141 modified mix is deceptive; when of correct consistency it may appear to be too dry. However, it will be found that it can be compacted and trowelled satisfactorily. Avoid using excessive water.

APPLICATION

Rendering to vertical surfaces:

Apply the bonding slurry to the prepared surface and then apply the SikaEmaco®-141 render into the wet bonding slurry.

Apply SikaEmaco®-141 modified mortars in coats at a maximum thickness of 6mm per coat. Greater thickness can lead to slumping. Several coats can be applied in fairly rapid succession, usually within 15 to 30 minutes of the previous coat. Close the surface using a

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wooden float or steel trowel.

Another method is to let the first coat of render dry overnight and apply another slurry coat before applying the second coat of render.

Screeds and toppings, applied to horizontal surfaces: Screeds, patches, etc., based on SikaEmaco®-141 modified cements, can be laid to any thickness from 60mm down to 6mm minimum. After mixing, the SikaEmaco®-141 modified mix should be placed over the still wet bonding slurry, well compacted and struck off to level. It may then be trowelled to the required finish using a wooden float or steel trowel.

As Waterproofing & Tanking:

Wet down surfaces, ensuring that they are saturated but free of surface water. Prepare a waterproof slurry of 1½ to 2 parts cement with ½ to 1 part fine quartz sand to 1 part SikaEmaco®-141 by volume, mixed to a lump-free creamy, consistency. Using a stiff brush, work the slurry well into the damp surface, ensuring that no pinholes are visible. Apply second coat at right angle to first, and after first coat have turn totally dry.

Curing:

Moisture cure for 24 hours and then allow to dry slowly.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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