

## PRODUCT DATA SHEET

# SikaLatex<sup>®</sup>-141

(formerly MCast 141)

Water resistant bonding agent and mortar admixture

### DESCRIPTION

SikaLatex<sup>®</sup>-141 is a (SBR) styrene-butadiene co-polymer latex specifically designed for use with cement compositions. It is used in mortar and concretes as an admixture to increase resistance to water penetration, improve abrasion resistance and durability. It is used with cement as a reliable water-resistant bonding agent.

The use of SikaLatex<sup>®</sup>-141 synthetic latex in cement-based slurries and mortars compensates for many deficiencies in the mixes without detracting from their inherent strength and properties.

SikaLatex<sup>®</sup>-141 has been developed specifically for use with Portland cements. As ordinary mortar dries out, voids are left which make it permeable and weaker. When SikaLatex<sup>®</sup>-141 is added, the SikaLatex<sup>®</sup>-141 particles bind together to form continuous films and strands - these stitch the opposite sides of the voids together and block up the spaces, increasing strength and resistance to water penetration. SikaLatex<sup>®</sup>-141 combined with cement produces an excellent adhesive; each component compliments the properties of the other in this respect.

Suitable for use in hot and tropical climatic conditions.

### USES

- Concrete repair.
- Floor screeds and toppings.
- External rendering.
- Waterproofing and tanking.
- Fixing slip bricks and tiles.
- Corrosion protection of steel.

#### Concrete repair:

Spalled concrete, repairing floors, beams and precast slabs.

#### Floor screeds and toppings:

Abrasion resistant and non-dusting floors, underlay for special finishes, mild chemical, and effluent-resistant 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, bonding new concrete to old.

### FEATURES

- Earlier hardening.
- Improved flexibility.
- Reduced shrinkage.
- Prevents bleeding.
- Lower water-cement ratio.
- Increased durability and toughness.
- Resistance to water penetration.
- Good abrasion resistance.
- Good frost resistance and resistance to salt permeation.
- Good resistance to many chemicals and to mineral oil.
- Excellent adhesion to steel and concrete. Adheres well to brick, glass, asphalt, wood, expanded polystyrene and most building materials.
- Prolonged corrosion protection.
- Similar thermal expansion and modulus properties to concrete (unlike resin mortars and primers).
- Non-toxic.
- More economical than epoxy or polyester resin mortar.

## TECHNICAL INFORMATION

<b>Indicative performance of mortar mix</b>	Unless otherwise stated typical properties are based on a 3:1 sand/cement mix in which 10 L of SikaLatex®-141 per 50 kg of Type I OPC cement has been incorporated.	
Compressive strength		40 N/mm <sup>2</sup> dependent on cement used and workability
Freeze thaw resistance		Excellent
Water Vapour permeability		< 4gm/m <sup>2</sup> /24hr, through an 11 mm thick test piece.
Adhesion		Excellent to concrete, steel, brick, glass, etc
Co-efficient of thermal expansion		-20°C to +20°C: 12.8 x 10 <sup>-6</sup> -20°C to +60°C: 12.9 x 10 <sup>-6</sup>
Chemical resistance		Resists mild acids, alkalis, sulphates, chlorides, urine, dung, lactic acid, sugar, etc.
Resistance to water under pressure – 30m head		Excellent - no water through a 15mm thick test piece

## PRODUCT INFORMATION

<b>Composition</b>	Styrene and butadiene by high pressure emulsion polymerisation. The latex consists of microscopic particles of synthetic rubber dispersed in an aqueous solution. SikaLatex®-141 modified mixes may be slightly darker than corresponding unmodified mixes.
<b>Packaging</b>	20 L cans, drums and 1,000 L flowbin
<b>Shelf life</b>	12 months from date of production if stored properly
<b>Storage conditions</b>	Store properly in undamaged original sealed packaging, in dry cool conditions at temperatures between 5°C and 30°C. Protect from direct sunlight, contamination and moisture.
<b>Appearance and colour</b>	Milky, white liquid
<b>Density</b>	~1.02 kg/l
<b>Total chloride ion content</b>	≤ 0.1 %

## APPLICATION INFORMATION

<b>Recommended dosage</b>	For all normal use, the standard dose of 5 L of SikaLatex®-141 per 50 kg cement is adequate. For extreme conditions and/or when adhesion, waterproofing, water vapour resistance or chemical resistance are critical, the dosage should be increased to 10 L of SikaLatex®-141 per 50 kg cement. For this higher dosage, the extra water addition required is low and the use of wet aggregate may result in excessive workability.
<b>Compatibility</b>	SikaLatex®-141 is specifically designed for use with Portland cements. It is also compatible with sulphate-resisting cement, Types II and V. Lime (more than 10 % cement weight), air entraining agents and masonry cement must not be used in conjunction with SikaLatex®-141. For use with other cements, please consult our Sika Technical Department.

## 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.

## IMPORTANT CONSIDERATIONS

- Use sand that is sharp, washed, well graded and free from excessive fines. For general use select a BS 882 C&M (previously Zone 2) sand. For rendering or plastering on vertical surfaces, select a sand complying with BS 1199 Table 1.
- Clean uncontaminated water should be used.
- Never apply SikaLatex®-141 modified mixes or concrete to a bonding slurry that has been allowed to dry out.
- Keep the mixing time to a minimum.
- Until the user becomes familiar with its workability, the appearance of a SikaLatex®-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.
- Trowelling should proceed with the work. Do not over-trowel and avoid re-trowelling. Protect from too rapid drying out prior to trowelling.
- The standard rules of good practice for production and placing of bonding bridge, repair and adhesive mortars must be observed when using SikaLatex®. Refer to relevant standards.
- Fresh applied mortar must be cured properly especially at high temperatures in order to prevent plastic and drying shrinkage. Use Sika® Antisol® products as a curing agent or apply wet hessian.
- Higher dosages can be used depending on the mix design, raw materials, climatic conditions and mortar requirements.
- The stated mixes are for guidance only. For optimum results, always ensure that the correct SikaLatex® : Water ratio is used.
- Trial mixes must be performed to establish the exact dosage rate required.

## ECOLOGY, HEALTH AND SAFETY

Avoid contact with eyes and prolonged contact with skin. During application always wear gloves and appropriate clothing to minimise contact. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes. Should skin contact occur, wash immediately with soap and water. Seek the advice of a physician should symptoms persist. Consult the Safety Data Sheet (SDS) for detailed information.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

Surfaces to which SikaLatex®-141 is to be applied should be clean, sound and free of deleterious substances. Remove all laitance, oil, grease, mould oil or curing compound from concrete surfaces using wire brush, scabber 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. Always pre-soak absorbent surfaces, such as concrete, brick, stone, etc., ensuring that they are saturated but free of surface water.

### MIXING

Mix SikaLatex®-141 with the correct amount of water to produce a gauging solution. Pour part of the gauging solution into a suitable mixing container. While stirring slowly, add the cements and mix to the gauging solution and mix thoroughly until a smooth, uniform and lump-free mix is achieved. Within the mixing time add additional gauging solution to adjust to the desired consistency. For use as a bonding slurry or waterproof coating mixing is best achieved using a slow speed drill and paddle. Hand mixing is only permissible when the total weight of the mix is less than 25 kg. Prepare a bonding slurry of 1½ to 2 parts cement to 1-part SikaLatex®-141, mixed to a lumpfree creamy, consistency. For renders, repair mortars, and floor screeds and similar aggregate or sand filled mortars, mixing should be in an efficient concrete mixer preferably a pan type mixer. Charge the mixer with the required quantity of sand, aggregate and cement and premix for approx. 1 minute. Add the SikaLatex®-141 and mix for 2 minutes only, to avoid excessive air entrapment. Then add the water slowly until the required consistency is achieved (avoid adding excessive water).

### APPLICATION METHOD / TOOLS

#### As a Bonding Slurry

Prepare a bonding slurry in line with recommended dosage. Using a stiff brush, work the bonding slurry well into the damp surface, ensuring that no pinholes are visible. Maximum thickness: 2 mm. If a second coat is necessary, it must be applied after the first coat is touch dry. The second coat must be applied at right angles to the first to ensure complete coverage. Coverage/Usage rate is approximately 20 L of SikaLatex®-141 mixed with 50 kg of OPC Type I cement will give a creamy slurry which will cover 20 m<sup>2</sup> of substrate dependent on surface texture and thickness applied.

### As a Vertical Render

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

Apply SikaLatex®-141 modified mortars in coats at a maximum thickness of 5–10 mm 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 wooden float or steel trowel.

### As a Floor Screed or Topping

Floor screeds, based on SikaLatex®-141 modified cements, can be laid to any thickness from 40 mm down to 12 mm minimum. After mixing, the SikaLatex®-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.

### CLEANING OF EQUIPMENT

All tools should be cleaned with water immediately after use. If delayed, use of soap and coarse wire wool may help. Solvents such as white spirit can be used to remove partially hardened mortar.

## 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 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.

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All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



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