

## PRODUCT DATA SHEET

# SikaScreed<sup>®</sup>-538

(formerly MTop 538)

Industrial grade self-smoothing cementitious floor overlay

## DESCRIPTION

SikaScreed<sup>®</sup>-538 is a self-smoothing, cementitious, non-structural, floor overlay for levelling and refurbishing cementitious based floor slabs. SikaScreed<sup>®</sup>-538 can be laid at thicknesses from 4mm - 40mm when hand applied or 6mm - 40mm when pump applied. SikaScreed<sup>®</sup>-538 simply requires coating with a resin-based seal coat.

## USES

- Finishing rough undulating floors
- Levelling up floors
- Refurbishing old floors
- Fastrack industrial refurbishment
- Not suitable for exterior applications or where moisture is present

## FEATURES

- Highly fluid and pumpable for fast installation
- Rapid strength gain
- Ready for foot traffic after 3-4 hours
- Return to service in 24 hours
- Rapid cure
- Self-smoothing
- Good compressive strength
- For internal use only

## PRODUCT INFORMATION

<b>Packaging</b>	25 kg bag
<b>Shelf life</b>	6 months from date of production
<b>Storage conditions</b>	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight, heat and moisture.
<b>Density</b>	~2.13 kg/l (mixed material, at 25°C)

## TECHNICAL INFORMATION

<b>Compressive strength</b>	<u>1 day</u> ~15 N/mm <sup>2</sup>	<u>28 days</u> ~35 N/mm <sup>2</sup>	(BS EN 13892, Part 1 & 2)
<b>Flexural-strength</b>	<u>1 day</u> ≥ 4 N/mm <sup>2</sup>	<u>28 days</u> ≥ 6 N/mm <sup>2</sup>	(BS EN 13892, Part 1 & 2)
<b>Tensile adhesion strength</b>	~1.0 N/mm <sup>2</sup>		(CQP)
<b>Shrinkage</b>	< 300 microstrain (7 days cured at 23°C)		(CQP)

## APPLICATION INFORMATION

<b>Consumption</b>	As a guide: ~2.13 kg of mixed material per m <sup>2</sup> per mm thickness. This figure is theoretical and does not include for any additional material required due to surface porosity, surface profile, variations in level or wastage, etc.		
<b>Yield</b>	A 25 kg bag of SikaScreed®-538 mixed with 5 L of water yields ~14.1 L.		
<b>Layer thickness</b>	Hand application: 4 mm min. / 40 mm max. Machine application: 6 mm min. / 40 mm max.		
<b>Ambient air temperature</b>	+5°C min. / +35°C max.		
<b>Mixing ratio</b>	5.0 L of water per 25 kg bag		
<b>Setting time</b>	<u>At 25°C</u>		
	<u>Initial</u>	<u>90 – 110 min.</u>	
	<u>Final</u>	<u>100 – 120 min.</u>	
<b>Application time</b>	Working time at 23°C: ~30 min.		
<b>Applied product ready for use</b>	<u>Foot traffic (cured at 23°C, 50% RH)</u>	<u>~3 hours</u>	
	Note: Times are approximate and will be affected by changing substrate and ambient conditions, particularly the temperature and relative humidity.		

## 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.
- Internal Reference - Version: MBS\_CC-UAE/Top\_538\_11\_05/v4/07\_21

## FURTHER DOCUMENTATION

- General Method Statement (GMS)

## IMPORTANT CONSIDERATIONS

- Not suitable for exterior applications. Use Sika-Level®-522 for external application.
- Do not apply on substrates with rising moisture. If rising moisture can occur, an effective damp proof membrane must be applied and be in compliance with the relevant national standard.
- Requirements defined in relevant valid standards, guidelines and data sheets apply.
- Protect from direct sunlight, hot or strong winds and extreme temperatures, to avoid cracking or crazing.

- Do not mix SikaScreed®-538 with cement or other cementitious product.
- Do not add extra water or other ingredients. Mix only full bags for best results.
- Substrate temperature should not exceed 35°C at the time of application.
- Voids and cracks (water pipes, holes, drainage pipes etc.) should be filled to prevent seepage through to lower levels. Consult with your local Sika Technical Representative for product recommendations.
- Joints should always be cut in toppings directly above those in the base slab to avoid random cracking.

## 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.

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# APPLICATION INSTRUCTIONS

## SUBSTRATE PREPARATION

Substrate must be clean and free of oil, sealers, curing compounds, paint, polymer coatings, dust or other foreign (contaminating) matter.

Remove all weak or broken pieces of concrete. If necessary, employ mechanical cleaning methods and equipment. If sealers, paint, polymer coatings or curing compounds are present on concrete substrate, remove with mechanical shot blasting equipment. SikaScreed®-538 is best applied where the application temperature is between 5°C and 35°C. Outside this range, please refer to your local Sika Technical Representative.

Voids and cracks (water pipes, holes, drainage pipes etc) should be filled to prevent seepage through to lower levels. Consult with your local Sika Technical Representative for product recommendations.

## PRIMING

The substrate shall be saturated with SikaCeram® P 302 and mixed with water 1:1. Use at least 0.2 L (approx.) of the primer for the initial priming (1:1). Allow to dry until a transparent film has been formed. Absorbent substrates should be primed twice. The second coat approx. 0.07 L / m<sup>2</sup>.

## MIXING

Mechanical mixing is required for SikaScreed®-538. For small areas, a slow speed stirrer of not more than 600 rpm fitted with a helical paddle, is suitable. Mixing time is 3 minutes.

Place the required quantity of water into the mixing vessel. Whilst mixing, slowly add the powder to the water within 2 minutes then mix for a further 1 minute. Allow mixed SikaScreed®-538 to stand for 3 minutes and then remix prior to application. Use chilled water at high temperatures for longer application time.

For improved efficiency and continuous production of SikaScreed®-538, it is recommended to use at least two mixing buckets.

For larger jobs, the use of a mechanical mixer/pump unit is recommended. Refer to your local Sika Technical Representative for suitable machines.

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## APPLICATION

Pour mixture over substrate or pump through a suitable pump to desired thickness.

Whether pouring from a mixing vessel or using a mechanical mixer with an application hose, the discharge point should be approximately 200 mm from the floor to prevent splashing and air entrapment. Progress should be steady and even. Application should take place continuously into the preceding wet material to ensure even thickness and flow. Do not make new edges and 'fill in' the middle.

The fresh wet topping can be rolled immediately with a suitable long spiked roller to release all air retained within the underlayment. Do not roll material that has been applied for more than 2-3 minutes.

## CURING TREATMENT

SikaScreed®-538 is self-curing, but as with all cementitious products in hot weather, take adequate measures to protect it from exposure to direct sunlight and hot winds. DO NOT use water spray or liquid membrane curing compounds as these may affect the surface texture or prevent bonding of subsequent adhesives used with floor coverings.

## CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened / cured material 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 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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