BUILDING TRUST

PRODUCT DATA SHEET

SikaCem®-810

Modified SBR Polymer Admixture

DESCRIPTION

SikaCem® 810 is a One Component modified SBR polymer ,blended with plasticisers and selected fillers. When diluted it produces a gauging solution for improving cementitious mixes.

USES

SikaCem® 810 when added to water in the correct ratio, then mixed with Cement and Sand / Aggregate to is used to produce:

- Bond Coat / Slurry
- Renders
- Floor screeds

CHARACTERISTICS / ADVANTAGES

- Improved Workability
- Improved Mechanical Properties, such as Abrasion and Impact
- Improved Resistance to Freeze / Thaw Cycles
- Reduced Shrinkage and Cracking
- Reduced Permeability
- Chloride Free
- Enhanced properties over unmodified SBR and Acrylic Resins

PRODUCT INFORMATION

Chemical Base	Liquid polymer and additives
Packaging	5Ltr and 20Ltr pail
Appearance / Colour	Light Grey liquid
Shelf Life	12 months
Storage Conditions	Store properly in undamaged and unopened original sealed packaging in dry and cool conditions. Liquid component must be protected from frost.
Density	~ 1.10 kg/l

TECHNICAL INFORMATION

Indicative performance of mortar mix

Compressive Strength
1:3 Cement; Sand Mortar Mix

	Unmodified Control	SikaCem 810 Modified 1:2 solution	(According to EN 196-1)
24 hours	~20MPa	~33MPa	
3 days	~33MPa	~45MPa	
7 days	~42MPa	~56MPa	
28 days	~55MPa	~63MPa	

Adhesion Strength Tensile 28 Days

	Unmodified Control	SikaCem 810 Modified 1:2 solution	(According to EN 196-1)
28 Days	~1MPa	~2MPa	

Adhesion strength can be improved by using Sikadur® 32 Normal or SikaTop® Armatec 110 EpoCem® as a bonding coat.
Adhesion strength will be dependent on conditions of substrate, preparation, techniques and application.
Final mechanical properties will be dependent on temperature, aggregate / sand type, moisture content and curing regime
More accurate information regarding workability, mechanical strengths and strength gains should be obtained from site trials and appropriate strength / adhesion tests
Where Increased open times and adhesion strength are required for bonding coat / slurry use Sikadur® 32 Normal or SikaTop® Armatec 110 EpoCem®

APPLICATION INFORMATION

Recommended Dosage

Suggested dosages and mix designs

Application	Mixing Ratio by volume **SikaCem 810 :** Water	Mixing Ratio by volume Cement : Sand : Agg	Thickness layer range (mm)
Bond Coat / Slurry	1 : 1	1 : 1 : 0	
Normal Duty Floor Screed / Floor Repair Mortar*	1 : 3 - 1 : 4	1 : 3 : 0	12-25
Render*	1 : 2 - 1 : 4	1 : 4 : 0	10-20

* Use bond coat
Sand to BS EN 12620 2002
Cement type - ordinary portland cement

Ambient Air Temperature

+5°C min. / +35°C max.

Substrate Temperature

+5°C min. / +35°C max.

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.

LIMITATIONS

- Correct curing procedures should be carried out immediately after application to ensure full cement hydration and to minimise cracking. Use polyethylene sheeting or other approved methods in accordance with render / screed standards.
- SikaCem® 810 must be diluted with water and mixed with cement for all applications.
- Do not add water over recommended dosage.

- Due allowance must be made for the moisture content of the sand to ensure the correct quantity of SikaCem® 810 is used as given in the standard mixes. In some circumstances this will result in the addition of undiluted SikaCem® 810 to the mix.
- When sand is mixed wet, the quantity of water added must in all cases be reduced to compensate.
- Protect freshly applied material from freezing.
- Do not add additional admixtures

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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Depending on the application, the substrate should be sound and free of all traces of contaminants, loose and friable particles, cement laitance, oils and grease etc.
For structurally bonded situations, the substrate must be structurally adequate.

Substrate Preparation

General:
The substrate should be prepared by suitable mechanical preparation techniques such as water jetting, needle guns, blastcleaning, scabblers etc. and properly prewetted to a saturated surface dry condition.

MIXING

SikaCem® 810 must be mechanically mixed using a forced action mixer or in a clean drum using a drill and paddle (max. 500 rpm). A normal concrete free fall mixer is NOT suitable.
Mix SikaCem® 810 with clean water to produce a gauging solution in the correct ratio for 90 seconds. Add gauging solution to cement / aggregate mix until desired consistency is achieved

APPLICATION METHOD / TOOLS

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated leaving no standing water. Always apply mix ‘wet on wet’ to bonding bridge / coat. Re-apply if surface dries

CLEANING OF TOOLS

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