BUILDING TRUST

PRODUCT DATA SHEET

Sikagard®-522 W Elastic

Crack bridging protective coating for concrete

DESCRIPTION

Sikagard® -522 W Elastic is a one-component, Plasto-elastic coating based on

UV-curing acrylic dispersion with excellent crack-bridging properties
Sikagard® -522 W Elastic complies with the requirements of EN 1504-2 as protective coating.

USES

- Sikagard® -522 W Elastic is used for protection and enhancement of concrete structures (normal and lightweight concrete), especially exposed outdoor concrete surfaces with a risk of cracking
- Sikagard® -522 W Elastic is used with concrete repair works as an elastic protective coating on Sika smoothing mortar (refer to your relevant product / system date sheet), fibre cement and over coating of existing soundly adhering coatings.
- Suitable for Protection against ingress (Principle 1, method 1.3 of EN 1504-9)
- Suitable for moisture control (Principle 2, method 2.3 of EN 1504-9)
- Suitable for increasing the resistivity (Principle 8, method 8.3 of EN 1504-9)

CHARACTERISTICS / ADVANTAGES

- Crack-bridging
- High diffusion resistance against CO_2 reducing the rate of carbonation
- Water vapour permeable
- Excellent long-term UV light resistance and good colour stability.
- Very good resistance against weathering and ageing
- Environmentally friendly (solvent free)
- Reduced tendency to dirt pick up and contamination
- The system is resistant to aggressive atmospheric influences.

APPROVALS / CERTIFICATES

EN 1504-2 performance testing

Determination of dynamic crack bridging properties according to EN1062-Protective coating according to EN1504-2,

Sikagard® -522 W Elastic has been tested as per SCAQMD Method 304-91

Result VOC Content < 50 g/L

PRODUCT INFORMATION

Packaging	20 kg plastic pails
Appearance / Colour	Thixotropic liquid available in a wide range of colours.
Shelf life	12 months from date of production if stored properly in undamaged and unopened original sealed packaging in coal and dry conditions.
Storage conditions	Protected from direct sunlight and frost
Density	~ 1.39 kg/l (at +20º)
Solid content by mass	~66.1%
Solid content by volume	~ 53.4 %

TECHNICAL INFORMATION

Cross cut	GT 0	EN ISO 2409
Crack bridging ability	Class A_5	EN 1062-7
Behaviour after artificial weathering	Pass after 2000 hours	EN 1062-11
Abrasion resistance	53.9 mg	ASTM D4060-19
Water vapour transmission	Class V_2	EN ISO 7783-2
	Dry film thickness: d = 160 µm	
	Equivalent air layer thickness: 0.98 m	
	Diffusion coefficient CO2: 20.75 g/m²d	
Chloride ion diffusion resistance	Nil Cm²/S after 35 days	Vinci Method
Carbonation resistance	Class, C_1	EN 1062-6
	Dry film thickness: d = 160 µm	
	Equivalent air layer thickness: SD, CO2 = 399 m	
	Diffusion coefficient CO2: µCO2 = 7.06 x 10^{-8}	
	*Equivialent air layer thickness for DFT 350 µm = 696 m	

SYSTEMS

System structure

System	Product	Number of applications
Priming(1)	Sikagard® -512 W Aquaprimer	1
Top coat(2)	Sikagard®-522 W Elastic	2 - 3

Note(1)

Please refer to the respective data sheet for additional information.

Note(2)

In case of an intensive yellow or red colour shade and/or a dark substrate, more than two coats might be required.

A Third coat is also required in order to achieve the required thickness for full durability (crack bridging, adhesion after thermal cycling, etc.)

APPLICATION INFORMATION

Mixing ratio

The materials are supplied ready for use. Stir thoroughly prior to application.

Consumption

Product	Per coat
Sikagard®-512W Aquaprimer	~ 0.10 - 0.15 kg/m²
Sikagard®-522 W Elastic	~ 0.15 - 0.35 kg/m²

Layer thickness

Minimum required dry film thickness to achieve the required characteristics (CO_2 equivalent air thickness of 50 m) = 160 microns.
Maximum required dry film thickness to achieve full durability characteristics (CO_2 diffusion, adhesion after thermal cycling and crack bridging) = 350 microns.

Ambient air temperature

+8°C min. / +30°C max.

Relative air humidity

< 80%

Dew point

Temperature must be at least 3°C above dew point

Substrate temperature

+8°C min. / +30°C max.

Waiting time to overcoating

Waiting time between coats at +20°C substrate temperature:

Previous coating	Waiting time	Next coating
Sikagard® -512W Aquaprimer	5 hours min.	Sikagard® -522 W Elastic
Sikagard® -522 W Elastic	8 hours min.	Sikagard® -522 W Elastic

Note:When application is on existing coatings, the waiting time for both primers will increase by 100%.
Refresher coats of Sikagard® -522 W Elastic can be applied without priming if the existing coat has been thoroughly cleaned.

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

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Exposed concrete without existing coating:

The surface must be dry, solid and free from loose and friable particles.

Suitable preparation methods are steam cleaning, high pressure water jetting or blastcleaning.

New concrete must be at least 28 days old.

If required, a levelling pore sealer (e.g. Sikawall 110, Sikawal 321 putty.) shall be applied – refer to the respective product data sheet.
For cement based products, allow a curing time of at least 14 days before coating.

Exposed concrete with existing coating:

Existing coatings must be tested to confirm their adhesion to the substrate and their suitability - adhesion test average >0.8 N/mm² with no single value below 0.5 N/mm². refer to the relevant Method Statement for more details.

For water based coating, use Sikagard® -512 W Aquaprimer as primer.

In case of doubt, carry out adherence testing to determine which primer is most suitable – wait at least 2 weeks prior to conduct the adhesion test – an average value of 0.8 N/mm² is required with no single value below 0.5 N/mm²

CLEANING OF EQUIPMENT

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

Hardened/cured material can only be mechanically removed.

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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