

# PRODUCT DATA SHEET

## Sikagard®-545 W Elastofill

INTERMEDIATE COAT FOR CRACK BRIDGING PROTECTIVE COATING SYSTEM



### DESCRIPTION

Sikagard®-545 W Elastofill is an elastic acrylic copolymer dispersion intermediate

Sikagard®-545 W Elastofill is part of a crack-bridging system comprising of:

- Sikagard®-551 S Elastic Primer (solvent containing) or
- Sikagard®-552 W Aquaprimer (water-based) as a primer
- Sikagard®-545 W Elastofill as intermediate coat
- Sikagard®-550 W Elastic as top coat

Sikagard® crack bridging system complies with the requirements of EN 1504-2 as protective coating.

### USES

Sikagard®-545 W Elastofill is designed as a crack-bridging intermediate coat in combination with Sikagard®-550 W Elastic

Sikagard®-545 W Elastofill as a filler coat closes pores, cavities and blowholes

Sikagard®-550 W Elastic as a coloured top coat protects and embellishes.

Sikagard® crack bridging system is used for protection and enhancement of concrete structures (normal and lightweight concrete), especially outdoor exposed concrete surfaces with a high risk of cracking.

- 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

- Water thinnable, ecologically harmless
- Easy to apply
- Easy filling properties for pores, small cavities and blowholes
- Outstanding carbonation inhibitor
- Good water vapour permeability
- Crack-bridging even at low temperatures (-20°C)
- Can retain board mark texture/formwork patterns if required
- Resistant to freeze/thaw and de-icing salts

### APPROVALS / CERTIFICATES

- Test according to ZTV SIB 90, TL/TP-OS-D II:
- LPM, Switzerland Test report No. A -33'883-2 dated July 09
- CE-marking and Declaration of Performance as Protective coating according to EN 1504-2:2004, based on certificate of factory production control issued by notified factory production control certification body and type testing.

### PRODUCT INFORMATION

<b>Composition</b>	Acrylate dispersion
<b>Packaging</b>	15 l oval plastic pail
<b>Appearance / Colour</b>	Light grey paste
<b>Shelf life</b>	12 months from date of production
<b>Storage conditions</b>	Store properly in undamaged, unopened original sealed packaging, in cool and dry conditions. Protect from direct sunlight and frost.

Density	~1.24 kg/l (at +20 °C)
Solid content by volume	~62%

## TECHNICAL INFORMATION

Elongation at Break	At room temperature (not exposed to weathering)	63%
	At -20 °C	32%
Tensile Adhesion Strength	1.0 N/mm <sup>2</sup>	(EN 1542)
Crack Bridging Ability	Class A3 (-20 °C)	(EN 1062-7)
Freeze Thaw De-Icing Salt Resistance	0.8 (0.7) N/mm <sup>2</sup>	(EN 13687-part 1 & part 2)
Behaviour after Artificial Weathering	Pass after 2000 hours	(EN 1062-11)
Diffusion Resistance to Water Vapour	Dry film thickness	d = 600 µm
	Equivalent air layer thickness	S <sub>D</sub> , H <sub>2</sub> O = 0.65 m
	Diffusion coefficient H <sub>2</sub> O	µH <sub>2</sub> O = 1.1 x 10 <sup>3</sup>
	Requirements for breathability	S <sub>D</sub> , H <sub>2</sub> O ≤ 5 m
Capillary Absorption	w = 0.02 kg/(m <sup>2</sup> h <sup>0.5</sup> )	(EN 1062-3)
Carbonation Resistance	Dry film thickness	d = 690 µm
	Equivalent air layer thickness	S <sub>D</sub> , CO <sub>2</sub> = 83 m
	Diffusion coefficient CO <sub>2</sub>	µCO <sub>2</sub> = 1.2 x 10 <sup>5</sup>
	Requirements for breathability	S <sub>D</sub> , CO <sub>2</sub> ≥ 50 m

## SYSTEMS

System Structure	System	Product <sup>(1)</sup>	Number of application
	Priming <sup>(2)</sup>	Sikagard®-552 W Aquaprimer	1
	Intermediate coat <sup>(3)</sup>	Sikagard®-545 W Elastofill	1-2 <sup>(3)</sup>
	Top coat <sup>(4)</sup>	Sikagard®-550 W Elastic	2

(1) Please refer to the respective product data sheet for additional information

(2) For concrete with a surface tensile adhesive strength < 1 N/mm<sup>2</sup> use solvent containing primer Sikagard®-551 S Elastic Primer

(3) Number of application layer of Sikagard®-545 W Elastofill depend on technical requirement, substrate condition or application (e.g. overhead application, high crack bridging requirement, etc.).

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

## APPLICATION INFORMATION

Consumption	Product	Per coat	Per coat
	Sikagard®-552 W Aquaprimer	-	~ 0.10-0.15 kg/m <sup>2</sup>
	Sikagard®-545 W Elastofill	~ 0.60-0.85 l/m <sup>2</sup>	~ 0.80-1.10 kg/m <sup>2</sup>
	Sikagard®-550 W Elastic	~ 0.18-0.25 l/m <sup>2</sup>	~ 0.25-0.35 kg/m <sup>2</sup>

**Layer Thickness** This will depend on the site requirement and use of the product.

<b>Ambient Air Temperature</b>	+8 °C min. / +30 °C max.	
<b>Relative Air Humidity</b>	< 80%	
<b>Dew Point</b>	Substrate and ambient temperature must be at least 3 °C above dew point.	
<b>Substrate Temperature</b>	+8 °C min. / +30 °C max.	
<b>Waiting Time / Overcoating</b>	Waiting time between coats at +20 °C substrate temperature:	
	<b>Previous coating</b>	<b>Waiting time</b>
	Sikagard®-552 W Aquaprimer	5 hours min.
	Sikagard®-551 S Elastic Primer	18 hours min.
	Sikagard®-545 W Elastofill	12 hours min.
	Sikagard®-545 W Elastofill	10 hour min.
	Sikagard®-550 W Elastic	8 hours min.
	<b>Next coating</b>	
	Sikagard®-545 W Elastofill	
	Sikagard®-545 W Elastofill	
	Sikagard®-550 W Elastic	
	Sikagard®-550 W Elastic	
	Note: Refresher coat of Sikagard®-545 W Elastofill or Sikagard®-550 W Elastic can be applied without priming if the existing coat has been thoroughly cleaned. Adhesion tests are always recommended in maintenance and re-furbishment works.	
<b>Curing Treatment</b>	Sikagard®-545 W Elastofill does not require any special curing but must be protected from rain for at least 6 hours at +20 °C.	
<b>Applied Product Ready for Use</b>	Full cure: ~ 7 days at +20 °C	

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

#### Exposed concrete without old coating

The surface must be dry, sound 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 cement based pore sealer (e.g. Sika® MonoTop®-621 Evolution, Sikagard®-720 EpoCem®, e.t.c.) can be used – refer to the respective product data sheet. Allow a curing time of at least 4 days before coating (except when the EpoCem is used, then coating can be applied within 24 hours).

#### 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/mm<sup>2</sup> with no single value below 0,5 N/mm<sup>2</sup>. Refer to the relevant Method Statement for more details.

For water based coating, use Sikagard®-552 W Aquaprimer as primer.

For solvent based coating, use Sikagard®-551 S Elastic Primer 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/mm<sup>2</sup> is required with no single value below 0,5 N/mm<sup>2</sup>.

Please note:

The concrete surface must have a fine gripping texture. Very smooth surfaces may require two applica-

tions with Sikagard®-545 W Elastofill in order to close up all surface blowholes and pores etc.

### APPLICATION

Sikagard®-545 W Elastofill is supplied ready for use. Stir thoroughly prior to application.

#### Priming coat

Apply Sikagard®-551 S Elastic Primer or Sikagard®-552 W Aquaprimer evenly onto the substrate. On very dense substrates up to 10% Sika Thinner C may be added to Sikagard®-551 S Elastic Primer.

#### Intermediate coat

Sikagard®-545 W Elastofill shall be applied by brush or mechanical spray (screw type pump).

Blowholes and pores etc. must be carefully filled, using sufficient material.

Attention must be paid to endure a uniform application.

If a decorative surface texture is to be preserved, application must be carried out following the lines of the texture runs.

#### Texturing of the surface

First application as described above.

For the second application, Sikagard®-545 W Elastofill shall be rolled on with short-piled rollers with the addition of 2 to 3% water. This method gives an attractive finished texture.

#### Top coat

Sikagard®-550 W Elastic shall be applied by brush, roller or airless spray.

## CLEANING OF EQUIPMENT

Clean all tools and application equipment with clean water immediately after use. Hardened / cured material can only be removed mechanically. For Sikagard®-551 S Elastic Primer use Sika Thinner C.

## IMPORTANT CONSIDERATIONS

Do not apply when there is:

- Expected rain
- Relative humidity > 80%
- Temperature below +8 °C and/or below dew point
- Concrete younger than 28 days

The system is resistant to aggressive atmospheric influences.

## 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.

## 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.

## 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.

## DIRECTIVE 2004/42/CE LIMITATION OF EMISSIONS OF VOC

According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / c type wb) is 40 g/l for the ready to use product. The maximum content of Sikagard®-545 W Elastofill is < 40 g/l VOC for the ready to use product.

## 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.

### Sika Hellas ABEE

15 Protomagias Str.  
14568 Kryoneri  
Attica-Greece  
Tel.: +30 210 8160 600  
Fax: +30 210 8160 606  
www.sika.gr | sika@gr.sika.com



Product Data Sheet  
Sikagard®-545 W Elastofill  
January 2019, Version 01.02  
020303030030000002

Sikagard-545WElastofill-en-GR-(01-2019)-1-2.pdf