

Sikagard®-550 W Elastic

Crack Bridging Dispersion for Fair-faced Concrete

Product Description **Sikagard®-550 W Elastic** is a one-component, plasto-elastic coating based on a UV-curing acrylic dispersion with excellent crack-bridging properties even at temperatures below 0° C.
Suitable for use in hot and tropical climates.

Uses **Sikagard®-550 W Elastic** is used for the protection and embellishment of reinforced concrete structures (normal and lightweight concrete), especially exposed concrete surfaces subjected to hairline cracking and, for retro-fit concrete repairs as an elastic protective coating applied over Sikagard® 720 EpoCem®, SikaRep®-100 or Sika® MonoTop®-620 levelling mortars.

Advantages

- Crack bridging even at -20° C
- High diffusion resistance against CO₂
- Water vapour permeable
- Excellent resistance against weathering and ageing
- Can be diluted with water
- Favorable environmental rating
- Little tendency towards contamination.

Test reports Test report acc. ZTV-SIB OS DII from the Polymer Institute dated 16.10.01 Nr. P 2438
Test report acc. ZTV-SIB OS DII from the Polymer Institute dated 16.10.01 Nr. P 2436
The product is specified in a compilation of tested products and systems as per OS 5a (OS DII) at the German Institute of Road Systems.

Product Data

Type Acrylic resin

Colour Shades Can be supplied in almost every RAL colour shade.

Packaging Sikagard®-551 S Elastic Primer: 20 lt, 10 lt and 3 lt cans
Sika® Thinner C: 25 lt, 10 lt, 3 lt and 1lt cans
Sikagard®-550 W Elastic: 10 lt and 15 lt (oval plastic pails).

Storage Condition Store in original sealed containers in a cool and dry environment between 5°C and 35°C away from direct sunlight.

Shelf life 12 months minimum from production date if stored in original sealed containers.



Technical Data

Elasticity

Elongation at break at room temperature without weathering = 120%
Elongation at break at -20° C = 70%

Diffusion values

Diffusion CO ₂	Dry film thickness	Equivalent air layer thickness	Resistance figure for diffusion
Result of test	S	S _D CO ₂	μCO ₂
	μm	m	-
	337	84	2.5 X 10 ⁵
Requirements	-	≥ 50m	-

Diffusion H ₂ O	Dry film thickness	Equivalent air layer thickness	Resistance figure for diffusion
Result of test	S	S _D H ₂ O	μ H ₂ O
	μm	m	-
	319	0.78	2.5 X 10 ³
Requirements	-	< 4m	-

Coating system

Depending on substrate;

1 x Sikagard®-551 S Elastic Primer or Sikagard®-700 S respectively, for dense substrates with pull-off values > 1,0 N/mm²
2 - 3 x Sikagard®-550 W Elastic

or,

1 - 2 coats of Sikagard®-545 W Elastofill
+ 1 coat of **Sikagard®-550 W Elastic**.

Blast cleaned lightweight concrete must be pre-levelled with Sikagard®-720 EpoCem® or Sika® MonoTop®-620 mortar prior to painting.

For closing pores and holidays in concrete use Sikagard®-545 W Elastofill.

Coating system	A	B	C
Measures for maintenance			
Levelling	Sika MonoTop-620 or Sikagard-720 EC	Sika MonoTop-620 or Sikagard-720 EC	-
Priming	Refer to Technical Services Department	Refer to Technical Services Department	Sikagard-551 S Elastic Primer
Filler coat	-	-	Sikagard-545 W Elastofill 2 x 0,7 - 0,8 kg/m ²
Top coat	2 - 3 coats Sikagard®-550 W Elastic approx. 0,250 -0,350 kg/m ² per coat	1 - 2 coats Sikagard®-550 W Elastic approx. 0,250 kg/m ² per coat	2 coats Sikagard®-550 W Elastic approx. 0,250 -0,300 kg/m ² per coat
Coating system	D	E	F
Measures	Preventive protection	Preventive protection	Maintenance touch up work of dispersions
Priming	Sikagard-551 S Elastic Primer 100 gm/m ²	Sikagard-551 S Elastic Primer 100 gm/m ²	Refer to Technical Services Department
Intermediate coat	-	Sikagard-545 W Elastofill 1- 2 x 0,7 - 0,8 kg/m ²	Sikagard-526 pore filler 1- 2 x 0,2 - 0,3 kg/m ²
Top coat	2 coats Sikagard®-550 W Elastic approx. 0,250 -0,300 kg/m ² per coat	2 coats Sikagard®-550 W Elastic approx. 0,250 -0,300 kg/m ² per coat	2 coats Sikagard®-550 W Elastic approx. 0,250 -0,300 kg/m ² per coat

If well cured Sikagard®-720 EpoCem or Sika® MonoTop®-620 mortar is used, primer is not required. In case of doubt, a field testing area is recommended to check adhesion; the result can be checked by a cross hatch test.

Sikagard®-551 S Elastic Primer must not be applied on PCC-levelling mortars.

In case of an intensive yellow or red color shade and a dark substrate, further layers may be required in order for reasons of perfect opacity

Specific gravity, volume solids, material consumption

	specific gravity of liquid	solid content approx. %		theoretical layer thickness with a consumption of 100 g/m ²		material consumption for medium dry film thickness of approx 100 micron	
		by vol.	by weight	wet mm	dry µm	µm	Approx. kg/m ²
Sikagard®- 551S Elastic Primer	0.94	19	25	-			
Sikagard®-700 S	0.80						
Sikagard®- 550 W Elastic	1.39	53.4	66.1	73	39	0.185-0.220	0.260-0.300*

*depending on irregularities of concrete surface

Sikagard®-550 W Elastic is resistant to the usual aggressive agents occurring in the atmosphere.

Application

Surface preparation

Substrates must be dry, sound, free of dust, grease, oils and of loose and friable particles. At a depth of up to approximately 2 cm the moisture content should not exceed 5% .
Preparation should be according to ZTV-SIB 90, paragraph 2, Table 3.

Mixing

Sikagard®-551 S Elastic Primer, Sikagard®-700 S and **Sikagard®-550 W Elastic** are supplied ready for use. Prior to application stir thoroughly.
Depending on the density of the substrate, Sikagard®-551 S Elastic Primer may be thinned by up to 25% with Thinner C.
Sikagard®-550 W Elastic must be applied un-diluted in order to achieve the required dry film layer thickness.

Application method

Sikagard®-551 S Elastic Primer and Sikagard®-700 S:
by brush or roller.
Sikagard®-550 W Elastic:
by brush, distemper brush or roller. Large areas must be coated by roller or airless spraying.

Ambient and substrate temperature

Minimum +8° C. Maximum +35°C
≤ 80% relative air humidity

Waiting times between applications

	+ 8 to +10°C	+ 15 to +20°C	+ 30 to 35°C
Sikagard-551 S Elastic Primer + Sikagard®-550 W Elastic	24 hours	18 hours	6 hours
Sikagard-700 S + Sikagard®-550 W Elastic	24 hours	18 hours	6 hours
Sikagard®-550 W Elastic	12 hours	8 hours	6 hours

Note: When over coating old coats the waiting times will increase 100%.

Final drying time

The coating is rain resistant within the stated consumption figures after the following drying times:

Temperature °C	Relative air humidity %	Time (hours)
20	70-80	3.5
15	70-80	3.5
10	70-80	4.0
8	70-80	6.0

Overcoatability

After a minimum waiting time Sikagard®-551 S Elastic Primer and Sikagard®-700 can be over coated with itself and with Sikagard®-550 W Elastic any time. Refresher coats with Sikagard®-550 W Elastic can be applied without priming if the old coat has been thoroughly cleaned and lightly abraded.

Cleaning

For Sikagard®-551 S Elastic Primer: Sika Thinner C
 For **Sikagard®-550 W Elastic**: Water.

Notes

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.

Safety

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

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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