

PRODUCT DATA SHEET

Sikagard®-670 W Elastocolor

PROTECTIVE COATING FOR EXPOSED CONCRETE

PRODUCT DESCRIPTION

Sikagard®-670 W Elastocolor is a one component anti-carbonation coating, based on water dispersed acrylic resins, which produces a matt finish.

USES

- As an anti-carbonation coating on cement mortar or reinforced concrete surfaces
- To protect façades and concrete elements and as aesthetic finishing without altering the substrate texture.
- As preventive protection of new reinforced concrete structures in an aggressive environment
- As protective and decorative coating on repair work with Sika® MonoTop® systems
- To protect fibre reinforced concrete

CHARACTERISTICS / ADVANTAGES

- High CO₂ diffusion resistance
- Water vapour permeability, allowing substrate to breathe
- Excellent weathering and ageing resistance
- Prevents water ingress
- Ecological, solvent free
- Easy to apply

APPROVALS / STANDARDS

Product for protection against the penetration, humidity control and resistivity increase (coating) following EN 1504-2:2004, with Declaration of Performance 01 03 03 03 006 0 0000001 1053, with the certificate of conformity of the factory production control number 0099/CPR/B15/0007

- 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)

PRODUCT INFORMATION

Chemical Base	Water dispersed acrylic resins
Packaging	20 Litre pail
Appearance / Colour	White only - RAL 9003
Shelf Life	12 months from date of production
Storage Conditions	Store properly in undamaged and unopened, original sealed packaging in dry and cool conditions, protect from frosts.
Density	~ 1.30 kg/l (at +20°C)
Solid content by weight	~ 45%
Solid content by volume	~ 60%

TECHNICAL INFORMATION

Water Vapour Transimission	Water Vapour Diffusion Coefficient ($\mu\text{H}_2\text{O}$)	
	Dry film thickness	$d = 120 \mu\text{m}$
	Equivalent air layer thickness	$S_{D, \text{H}_2\text{O}} = 0.40 \text{ m}$
	Diffusion coefficient CO_2	$\mu\text{H}_2\text{O} = 3400$
	Requirements for breathability	$\leq 5 \text{ m (Class 1)}$
Chloride Ion Diffusion Resistance	Carbon Dioxide Diffusion Coefficient (μCO_2)	
	Dry film thickness	$d = 130 \mu\text{m}$
	Equivalent air layer thickness	$S_{D, \text{CO}_2} = 1766 \text{ m}$
	Diffusion coefficient CO_2	$\mu\text{CO}_2 = 13.6 \times 10^5$
	Requirements for protection	$\geq 50 \text{ m}$

SYSTEM INFORMATION

System Structure	Normal absorbent concrete and/or well cured smoothing coatings (Sika® MonoTop®-620, etc):		
	System	Product	Number of applications
	-	Sikagard® -670 W Elastocolor	2
	Smooth non absorbent concrete:		
	Priming	Sikagard®-551 S Elastic Primer	1
	Top Coat	Sikagard®-670 W Elastocolor	1-2
	Absorbent substrates:		
	Priming	Sikagard® -670 W Elastocolor diluted in 5% of water	1
	Top Coat	Sikagard® -670 W Elastocolor	1-2
	Marine environments, exposed concrete to de-icing salt splashes:		
	Priming	Sikagard® Hydrophobic Impregnation	1
	Top Coat	Sikagard® -670 W Elastocolor	2
	Note: A third coat of Sikagard®-670 W ElastoColor might be required dependent of the substrate porosity or if applied on a dark and well adhering existing coating.		

APPLICATION INFORMATION

Mixing Ratio	The product is supplied ready for use and must be not thinned unless the 1st coat is used as a primer (refer to coating system structures). In these instances, add up to 2 - 5% of water and mix thoroughly. Un-thinned material must be stirred up thoroughly prior to application.	
Consumption	Product	Per layer
	Sikagard®-551 S Elastic Primer	~ 0.10 - 0.15 kg/m ²
	Sikagard®-552 W Aquaprimer	~ 0.10 - 0.15 kg/m ²
	Sikagard® Hydrophobic Impregnation	Check Technical Data Sheet
	Sikagard® -670 W Elastocolor	~ 0.18 - 0.23 kg/m ²
Ambient Air Temperature	+8° C min / +35° C max	
Relative Air Humidity	< 80%	

Substrate Temperature +8° C min / +35° C max

Waiting Time / Overcoating	Previous coating	Waiting time	Next coating
	Sikagard®-552 W Aquaprimer	12 hours min	Sikagard®-670 W Elastocolor
	Sikagard®-551 S Elastic Primer	18 hours min	Sikagard®-670 W Elastocolor
	Sikagard® Hydrophobic Impregnation	5 hours min	Sikagard®-670 W Elastocolor
	Sikagard®-670 W Elastocolor	1 hour min	Sikagard®-670 W Elastocolor

Note: A refresher coat of Sikagard®-670 W Elastocolor can be applied without priming if the existing coat has been thoroughly cleaned.

Applied Product Ready for Use Full cure: ~4 hours at +23°C

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Exposed concrete without existing 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 cementitious smoothing coating or pore filler (e.g. Sika® MonoTop®-620, etc.) shall be applied. For cement based products, allow a curing time of at least 4 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 > 1 N/mm² with no single value below 0.7 N/mm².

Insufficient adhesion

Must be removed by appropriate methods all old coatings and the substrate must be sturdy enough to be coated.

Sufficient adhesion

Thoroughly clean the entire surface by blasting high pressure water or steam jet.

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 1.0 N/mm² is required with no single value below 0.7 N/mm².

APPLICATION

Sikagard®-670 W Elastocolor can be manually applied by brush or short piled roller or mechanically by airless spray.

The second layer product must be applied in perpendicular to the first direction to achieve an optimal opacity.

For airless spray application:

- ~ 150 bar pressure
- ~ 0.38 to 0.53 mm nozzle

- Application angle ~50 - 80°

CLEANING OF TOOLS

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.

LIMITATIONS

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.

At temperatures below +8°C to very absorbent substrates and with strong wind, there is a risk of drying cracks and reduced adhesion.

VALUE BASE

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 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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Product Data Sheet
Sikagard®-670 W Elastocolor
February 2020, Version 01.02
020303030060000001

Sikagard-670WElastocolor-en-GB-(02-2020)-1-2.pdf