

PRODUCT DATA SHEET

Sikagard®-675 W ElastoColor

Plasto-elastic protective coating for concrete

DESCRIPTION

Sikagard®-675 W ElastoColor is a one-part, plasto-elastic water dispersed coating based on styrene acrylate dispersion for the protection and enhancement of fair-faced concrete. It can be applied over existing coatings or directly onto the concrete surfaces. The Product complies with the requirements of EN 1504-2 as protective coating.

USES

The Product is used as a decorative coating for:

- Reducing the deterioration of concrete by strongly reducing chloride and CO₂ intake
- Assisting with controlling the corrosion of any embedded steel reinforcement by reducing the moisture intake
- Concrete repair refurbishment works over Sika® pore filling or levelling mortars and overcoating existing firmly bonded coatings

The Product is used for:

- Protection against ingress (Principle 1, method 1.3 of EN 1504-9)\

- Moisture control (Principle 2, method 2.3 of EN 1504-9)
- Increasing the resistivity (Principle 8, method 8.3 of EN 1504-9)

CHARACTERISTICS / ADVANTAGES

- Water vapour permeable
- Very good resistance against weathering and ageing
- Very good chalking resistance
- Resistant to cycles of freeze and thaw exposure and de-icing salts
- Easy application
- Good opacity (covering power)
- Water-based
- Impermeable to liquids
- High diffusion resistance against CO₂ reducing the rate of carbonation

APPROVALS / CERTIFICATES

- CE marking and declaration of performance based on EN 1504-2:2004 Products and systems for the protection and repair of concrete structures — Surface protection systems for concrete — Coating
- Performance testing, EN 1504-2, Sikagard®-675 W ElastoColor, LPM AG, Report No. A-33' 884-2E

PRODUCT INFORMATION

Composition	Styrene acrylate dispersion
Packaging	15 L containers Refer to the current price list for available packaging variations.
Shelf life	12 months from date of production.
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in cool and dry conditions, protect from direct sun light and frost. Always refer to packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.

Appearance and colour

Thixotropic liquid. Available in many colours.

Refer to current price list for colour range.

Applied colours selected from colour charts will be approximate. For colour matching apply colour sample and confirm selected colour under real lighting, environmental and substrate conditions.

When product is exposed to direct prolonged sunlight, there may be some discolouration and colour variation

Density	~1.30 kg/l (at +20 °C)
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Solid content by mass	~57 %
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Solid content by volume	~43 %
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TECHNICAL INFORMATION

Crack bridging ability	Class A1 (+23 °C)	(EN 1062-7)
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Tensile adhesion strength	3.1 (2.9) N/mm ²	(EN 1542)
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Capillary absorption	w = 0.03 kg·m ⁻² ·h ^{-0.5}	(EN 1062-3)
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Diffusion resistance to water vapour	Dry film thickness	d = 170 µm	(EN ISO 7783)
	Equivalent air layer thickness	S _D , H ₂ O = 0.15 m	
	Diffusion coefficient H ₂ O	µH ₂ O = 800	
	Requirements for breathability	S _D , H ₂ O ≤ 5 m	

Permeability to carbon dioxide	Dry film thickness	d = 180 µm	(EN 1062-6)
	Equivalent air thickness	S _D , CO ₂ = 66 m	
	Diffusion coefficient CO ₂	µCO ₂ = 3,7 x 10 ⁵	
	Requirements for protection	S _D , CO ₂ ≥ 50 m	

Behaviour after artificial weathering	Pass after 2000 hours
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Freeze thaw de-icing salt resistance	3.0 (2.4) N/mm ²	(EN 13687-1)
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SYSTEM INFORMATION

System structure

Normal absorbent concrete or well cured thin layer Sika renders such as Sika MonoTop®-723 N, Sika® Icoment-520:

Function	Product	Coats
Priming	Sikagard®-675 W ElastoColor diluted with ~15 % water	1

Smooth non-absorbent concrete:

Function	Product	Coats
Priming	Sikagard®-551 S Elastic Primer	1

Absorbent fair faced concrete:

Function	Product	Coats
Priming	Sikagard®-552 W Aquaprimer	1

Splash zones, concrete exposed to de-icing salts splashes:

Function	Product	Coats
Priming	Sikagard®-705 L or other Sika hydrophobic impregnation (Penetration depth class II - EN 1504-2)	1-2

For all substrates:

Function	Product	Coats
Top coat	Sikagard®-675 W ElastoColor	2

Intensive yellow or red colour shades or dark coloured substrates may require more than two coats to achieve a good opacity.

APPLICATION INFORMATION

Consumption	Product	Per coat	
	Sikagard®-551 S Elastic Primer	~0.10–0.15 kg/m ²	
	Sikagard®-552 W Aquaprimer	~0.10–0.15 kg/m ²	
	Sikagard®-705 L	~0.15 kg/m ²	
	Sikagard®-675 W ElastoColor	~0.20–0.25 kg/m ²	
Layer thickness	Minimum required dry thickness to achieve full durability characteristics (CO ₂ diffusion, adhesion after thermal cycling) ≈ 180 microns		
Material temperature	Maximum	+35 °C	
	Minimum	+8 °C	
Ambient air temperature	Maximum	+35 °C	
	Minimum	+8 °C	
Relative air humidity	< 80 %		
Dew point	Substrate and ambient temperature must be at least 3 °C above dew point.		
Substrate temperature	Maximum	+35 °C	
	Minimum	+8 °C	
Waiting time to overcoating	Waiting time between coats at +20 °C substrate temperature:		
	Previous coating	Minimum waiting time	Next coating
	Sikagard®-552 W Aquaprimer	12 hours	Sikagard®-675 W ElastoColor
	Sikagard®-551 S Elastic Primer	18 hours	Sikagard®-675 W ElastoColor
	Sikagard®-705 L	5 hours	Sikagard®-675 W ElastoColor
Sikagard®-675 W ElastoColor	1 hour	Sikagard®-675 W ElastoColor	
	A refresher coat of name can be applied without priming if the existing coat has been thoroughly cleaned.		
Applied product ready for use	Final drying	~14 hours at +20 °C	
	Protect freshly applied coating from rain for at least 2 hours at +20 °C		

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

EXPOSED CONCRETE WITHOUT EXISTING COATING

Substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, surface treatments and loose friable material which can reduce the adhesion of the coating.

Substrate must be prepared mechanically using suitable equipment such as abrasive blast cleaning or high pressure water jetting to achieve a textured surface profile suitable for the product thickness and required coating adhesion values.

New concrete must be at least 28 days old.

Surface defects, blowholes, cavities and pores must first be prefilled using a pore filler (such as Sika Mono-Top®-3020, Sikagard®-720 EpoCem® or Sikagard®-545 W Elastofill) to provide a defect free surface.

For a cementitious pore filler, allow a curing time of at least 4 days before coating. If Sikagard®-545 W Elastofill or Sikagard®-720 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 compatibility. As guidance, in the absence of any national standards or regulations, adhesion test average $\geq 0.8 \text{ N/mm}^2$ with no single value below 0.5 N/mm^2 . For more information refer to the Method statement: Application of Sikagard® protective coatings.

INADEQUATE ADHESION

1. Existing coatings must be completely removed using suitable equipment and the substrate prepared the same as for 'without existing coating'.

ADEQUATE ADHESION

1. Thoroughly clean the existing fully bonded coating surfaces of all contaminants using suitable equipment such as steam cleaning or high pressure water jetting.
2. For a water-based existing coating, use Sikagard®-552 W Aquaprimer as a primer.
3. For a solvent-based existing coating, use Sikagard®-551 S Elastic Primer as a primer.
4. If coating type is unknown, carry out compatibility and adhesion testing to determine which primer is most suitable. Wait at least 2 weeks before conducting the adhesion test, as guidance, adhesion test average $\geq 0.8 \text{ N/mm}^2$ with no single value below

0.5 N/mm^2

APPLICATION

IMPORTANT

Climate conditions during application

The climate conditions during application and curing of the Product can affect the final performance achieved.

1. Do not apply the Product if rain is expected.
2. Allow enough time for the substrate to dry after rain or other inclement conditions.
3. Application during temperatures below the stated application temperatures may reduce adhesion values.

IMPORTANT

Maintenance coating times

Dark colour shades (especially black, dark red and blue) may fade quicker than other lighter colour shades. Therefore for aesthetic reasons a maintenance or refresher coat might be required at an earlier interval than usual.

The Product is supplied ready for use and must be not thinned unless the 1st coat is used as a primer (refer to the "system structure" section in System Information). In these instances, add up to 15% of water and mix thoroughly with a low speed electric drill and paddle. Sikagard®-675 W ElastoColor is applied by brush, roller or airless spray. For airless spray application:

Pressure	~150 bar
Nozzle bore	0.38–0.53 mm
Spray angle	~50–80°

PRIMER COAT

1. Apply by brush or roller, 1 coat of the appropriate primer at the required consumption rate, to all the surfaces requiring the Product.

PROTECTIVE COATING

1. Ensure the primer is thoroughly dry before overcoating to prevent the formation of bubbles and blisters, particularly in warmer weather.
2. The Product is supplied ready for use. Before application, mix using a low speed electrical single paddle mixer or other suitable equipment until a homogeneous consistency and colour is reached (depending on quantity 1–2 minutes).
3. Apply evenly by brush, roller or airless spray, 1-2 coats the Product to achieve the required total dry film thickness.
4. During application, regularly monitor the wet film thickness and material consumption to ensure the correct layer thickness is achieved.

CLEANING OF EQUIPMENT

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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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