



PRODUCT DATA SHEET

Edition 12.2018/v1
CSC Master Format™ 09 96 53
ELASTOMERIC COATINGS

Sikagard®-550 W Elastic

HIGH PERFORMANCE, WATER-BASED, CRACK-BRIDGING AND ANTI-CARBONATION, PROTECTIVE AND DECORATIVE COATING

Description Sikagard®-550 W Elastic is a water-dispersed and acrylic-based elastomeric coating for protective and decorative applications. It bridges micro-cracks, minimises carbon dioxide, water and chloride ingress and aesthetically enhances structures. Sikagard®-550 W Elastic may be used in conjunction with Sikagard® Elastic Base Coat where a textured and economic undercoat is required and/or with Sikagard®-552 W Aqua Primer where an excessively porous or chalky surface is to be coated.

Where to Use

- Elastic coating for concrete, mortar, stucco, masonry and exterior finishing systems subject to dynamic movement.
- As the protective and decorative finish for a complete concrete repair system.
- On new or existing buildings and civil-engineering structures prone to micro cracking.

Advantages

- Easily applied, typically self-priming and cost-effective.
- Bridges moving cracks even at low and sub-zero temperatures .
- Efficient protection against carbonation and chloride penetration.
- Water vapour permeable, allowing structures to breathe.
- Provides resistance to weathering, frost and de-icing salts.
- Excellent long-term UV light resistance and good colour stability.
- Extremely resistant to dirt pick-up and mildew.
- Non-toxic and non-flammable, as a system.
- An environmentally-friendly, low-VOC and water-based coating.
- Ministry of Transport Québec acceptance.
- Product qualified by The Road Authority (TRA).
- Canadian Food Inspection Agency acceptance.

Technical Data

Packaging	18.9 L (5 US gal.) resealable pail		
Colour	469 standard colours. Custom colour-matching available.		
Yield	<p>Sikagard®-550 W Elastic: 2.5 m²/L (101 ft²/US gal.) per coat. Normal coating system is two (2) coats, to a total dry film thickness of 16 mils. Wet film thickness necessary to achieve this is 16 mils per coat. A third coat may be necessary where opacity is reduced on dark substrates or with very bright colours.</p> <p>Sikagard® Elastic Base Coat: 2.5 m²/L(101 ft²/US gal.) per coat. Sikagard®-552 W Aqua Primer: 7 - 10 m²/L (285 - 407 ft²/US gal.) per coat. Actual coverage rates and material consumption will vary depending on the porosity and profile of the substrate. In addition, allowance must be also made for variation in applied film thickness, loss and waste. Test sections are recommended.</p>		
Shelf Life	2 years in original unopened pail. Store dry between 4 and 35 °C (40 and 95 °F) Condition material between 15 and 25 °C (60 and 75 °F) before using. Protect from freezing. If frozen, discard.		
Application Temperature (ambient and substrate)	Minimum	5 °C (40 °F)	
	Maximum	35 °C (95 °F)	
Waiting Time (between coats) and Drying Times	8 °C (45 °F)	20 °C (68 °F)	30 °C (85 °F)
Sikagard®-552 W Primer + Sikagard®-550 W Elastic	24 hrs	12 hrs	6 hrs
Sikagard®-550 W Elastic	12 hrs	8 hrs	6 hrs
Rain resistant (at 75 % R.H.)	24 hrs	4 hrs	2 hrs
(Note: Overcoating old coatings may increase the waiting times.)			
Properties at 23 °C (73 °F) and 50 % R.H.			
Solids Content	by weight	by volume	
Sikagard®-550 W Elastic	63 %	53 %	
Tensile Properties (ASTM D412 modified)			
Tensile strength	1.3 MPa (190 psi)		
Elongation at break	500 % at 23 °C (73 °F)		
Tensile strength at -18 °C (0 °F)	6 MPa (870 psi)		
Elongation at break at -18 °C (0 °F)	200 %		

Water Vapour Diffusion (at 16 mils = 400 microns dry film thickness) μ - value H₂O (diffusion coefficient) = 2146SdH₂O (equivalent air thickness) = 0.8 m (2.6 ft)**Carbon Dioxide Diffusion (at 16 mils = 400 microns dry film thickness)*****After 2000 hours** μ - value CO₂ (diffusion coefficient) = 214 000

R (equivalent air thickness) = 91 m (299 ft)

Sc (equivalent concrete thickness) = 23 cm (9 in)

*accelerated weathering

Crack-Bridging (at 16 mils = 400 microns DFT)

Static at -20 °C (-4 °F) 0.75 mm (30 mils)

Dynamic > 1000 cycles at -20 °C (-4 °F) 0.3 mm (12 mils)

Moisture Vapour Permeability ASTM E96 14.5 Perms**Resistance to Wind Driven Rain****(TT-C-555B)** No passage of water through the coating**Flame Spread and Smoke Development ASTM E84-94**

Flame Spread: 5 Smoke Development: 5

Class Rating: A

Weathering (ASTM G23) 10 000 hrs

Excellent, no chalking or cracking

VOC Content < 50 g/L**Chemical Resistance** Contact Sika Canada*Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.***HOW TO USE****Surface Preparation**

All surfaces to be coated must be dry, clean, sound, and frost free with curing compound residues, laitance and any other contaminants detrimental to bond removed. An open textured sandpaper-like surface is ideal (ICRI-CSP 3). Where necessary, surfaces should be prepared mechanically by blast cleaning or high pressure water-jetting. Bugholes, cracks or irregularities in the substrate should be filled and levelled with SikaTop®, SikaRepair® or Sika MonoTop® mortars as appropriate.

Priming/Base Coat

Sikagard® Elastic Base Coat is designed for use beneath Sikagard®-550 W Elastic as an economic, smooth or textured undercoat. All chalky or excessively porous substrates should be primed using Sikagard®-552 W Aqua Primer to allow easy application, reduce consumption, assist in achieving the required film thickness and optimize the adhesion of Sikagard®-550 W Elastic or Sikagard® Elastic Base Coat. Site trials should be carried out to determine the need for Sikagard®-552 W Aqua Primer.

Mixing

Stir all materials to ensure uniformity using a slow speed (300 - 450 rpm) drill fitted with a Jiffy-style paddle. Stir 3 to 5 minutes until a uniform consistency has been achieved..

Application

Any areas of glass or other surfaces should be masked to protect against contact with the primer, base coat or coating. Recommended application temperatures (ambient and substrate) is 5 to 35 °C (45 to 95 °F). Sikagard®-552 W Aqua Primer, where required, can be applied by brush, roller or spray (brushing provides more even and pore free coats and better penetration). Sikagard®-550 W Elastic can be applied by brush, roller, or spray moving in one direction. Allow previous coats to become dry to the touch prior to overcoating. At lower temperatures and/or high humidity, waiting time will be prolonged. At higher temperatures, work carefully to maintain a wet edge.

Note: As with all coatings, jobsite trials are recommended to establish system components, including need for priming, suitability of application equipment, acceptability of workmanship, nature of finish and colour selection.

Clean Up

Collect and contain spills with absorbent product. Discard in accordance with applicable regulations. Clean tools and brushes with water. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

Limitations

- Not designed for use as a traffic-bearing surface or as a roofing system.
- Minimum age of concrete prior to the application is 14 days, depending on curing and drying conditions (moisture content must be below 5 %).
- Minimum age of SikaTop®, SikaRepair® or Sika MonoTop® mortars prior to application is 3 days, depending on curing and drying conditions (moisture content must be below 5 %).
- Allow sufficient time for substrate to dry after rain or other inclement conditions.
- Do not store Sikagard®-550 W Elastic in direct sunlight for prolonged periods.
- Sikagard®-550 W Elastic should not be applied at relative humidity greater than 90 %, or if rain is forecast within the specified rain resistance period.
- Ensure that all surfaces and any primer or intermediate coats are thoroughly dry before starting to paint or overcoating to prevent formation of bubbles and blisters, particularly in warmer weather.
- Strong winds can cause shrinkage if material is applied at lower temperatures.
- During application, regular monitoring of the wet film thickness and material consumption is advised to ensure that the correct layer thickness is achieved.
- When overcoating Sikaflex® sealants, an additional prime/stripe coat of Sikagard®-550 W Elastic coat may be necessary over the sealant to minimize dirt pick-up on cured coating.
- When overcoating existing coatings, compatibility and adhesion testing is recommended.

Health and Safety Information

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

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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, within their shelflife. 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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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