

PRODUCT DATA SHEET

Sikagard®-680 MY

High performance methyl methacrylate (MMA) compositions for protection and decoration on concrete, masonry and steel structure

DESCRIPTION

Sikagard®-680 MY is a one part solvent containing coating, based on methacrylic resins resistant to weathering, alkalis and ageing. It is available in clear and coloured grades for use on mineral substrates including concrete and other cementitious surfaces. Sikagard®-680 MY protects concrete against aggressive atmospheric influences and promotes a self-cleaning effect on the treated surfaces. It does not adversely influence the characteristic texture of the concrete.

USES

- Protection and enhancement of concrete and other cementitious materials on building and infrastructure elements.
- Sikagard®-680 MY clear glaze:
Colourless material drying to a glossy coat, suitable as refresher and protective coating for exposed aggregate concrete.
- Sikagard®-680 MY top coat:
Top coating, drying to a mat finish, available in a large number of decorative standard and almost unlimited special colour shades.

CHARACTERISTICS / ADVANTAGES

- Provides excellent weather resistance and is based on a methacrylic resin with fast evaporating solvents
- Protects the concrete against aggressive atmospheric influences, which can penetrate into the concrete in the form of salts or gases
- Very high diffusion resistance against carbon dioxide and, therefore reduces considerably the rate and depth of carbonation of the concrete
- Water vapour permeability is not adversely affected
- Excellent resistance to dirt pick-up
- Highly UV-resistant MMA gives exceptional resistance to effects of long-term weathering

PRODUCT INFORMATION

Chemical base	Acrylate resin in solvent
Packaging	<ul style="list-style-type: none">▪ 20 L pail▪ 200 L drum
Shelf life	2 years from date of production
Storage conditions	Store properly in original, unopened and undamaged sealed packaging in cool and dry conditions. Protect from direct sunlight and frost.

Appearance / Colour	<ul style="list-style-type: none"> ▪ Clear glaze (clear liquid) ▪ Pebble grey (~RAL 7032) ▪ Light grey (~RAL 7035) ▪ White (~RAL 9010) ▪ Non-standard colours are also available upon request.
Flash point	Above 35 °C
Solid content by volume	~43 % (dependent on colour)

TECHNICAL INFORMATION

Water absorption	Reduction in water absorption > 80 % at 28 days	(ASTM C642-13)
Water vapour transmission	> 13 g/m ² -day	(BS EN ISO 7783 : 2011, Wet Cup Method A)
Permeability to carbon dioxide	> 250 m equivalent thickness of air	(BS EN 1062-6:2002, Method B)
Chloride ion diffusion resistance	> 90 % at 28 days	(ASTM C1556-11a)
Freeze thaw de-icing salt resistance	Unaffected by 50 exposure cycles (no scaling effect)	(ASTM C672-12)

SYSTEM INFORMATION

System structure	Sikagard®-680 MY clear glaze	
	As protection and enhancement of exposed aggregate concrete	2 × Sikagard®-680 MY clear glaze
	Sikagard®-680 MY top coat	
	In normal situation	2 × Sikagard®-680 MY top coat
	When using bright yellow and red colour shades	3 × Sikagard®-680 MY top coat
	When combined with hydrophobic impregnation priming coats	1–2 × Sikagard®-700 S or Sikagard®-700 MY
		2 × Sikagard®-680 MY top coat

APPLICATION INFORMATION

Consumption	Sikagard®-680 MY clear glaze	~0.15 kg/m ² per coat
	Sikagard®-680 MY top coat	~0.20 kg/m ² per coat
Relative air humidity	< 85 %	
Dew point	Beware of condensation! Substrate temperature must be at least 3 °C above dew point.	
Substrate temperature	+5 °C min. / +35 °C max. At rising temperature do not apply to concrete substrates without pore sealer.	
Waiting time / Overcoating	Substrate temperature	Time
	+10 °C	8 hours
	+20 °C	5 hours
	+30 °C	3 hours
	Note: Refresher coats of Sikagard®-680 MY can be applied without priming if the existing coating has been thoroughly cleaned.	
Applied product ready for use	~5 days at +20 °C	

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.

IMPORTANT CONSIDERATIONS

- Do not apply when there is expected rain, relative humidity > 85 % or substrate temperature below +5 °C or above +35 °C.
- Beware of condensation! Substrate temperature must be at least 3 °C above dew point.
- For lightweight concrete façade, we recommend a crack bridging intermediate coat such as Sikagard®-550 W IN.
- In marine environments or if the concrete surface is exposed to splashes of de-icing salts, an impregnation of Sikagard®-700 S or Sikagard®-700 MY is recommended as water repellent primer.
- On fair faced and precast concrete bubbles may occur if the application is carried out during rising temperatures.
- The system is fully resistant for all normal atmospheric exposures and rainfall etc.
- Splashed water containing de-icing salts or sea water may cause a loss of gloss and colour shade variation. However, the protective performances are not adversely affected.

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 / 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 levelling pore/void sealer (e.g. Sikadur® PF IN or Sikagard®-720 EpoCem® IN) should be applied. For cement base 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. Average adhesion results must be > 1.0 N/mm² with no single value below 0.7 N/mm².
- Inadequate adhesion: Existing coatings must be completely removed by suitable methods and the substrate must be sufficiently sound and suitable to be coated as above.
- Adequate adhesion: Thorough cleaning of all surfaces by means of steam cleaning or high pressure

water jetting. Normally, Sikagard®-680 MY can be applied on existing coating without any priming. It is recommended to carry out adhesion testing on a small scale prior to full scale operations.

Note: Existing water-based coating, even well adhering, must be removed completely prior to apply Sikagard®-680 MY.

APPLICATION

Stir thoroughly prior to application. In difficult painting conditions such as very low or very high temperatures, up to 5 % of Sika® Thinner-C can be added.

For use on very dense substrates, the first coat of Sikagard®-680 MY shall be tinned with up to 10 % Sika® Thinner-C.

Sikagard®-680 MY can be applied by brush or short-piled lambskin roller.

The top coat can also be applied by airless spray. Thinning with Sika® Thinner-C up to 7 % max., is allowed. Spray pressure 150–160 bars, nozzle bore 0.38–0.66 mm, and spray angle 50–80°.

CURING TREATMENT

Sikagard®-680 MY does not require any special curing but must be protected from rain for at least 1 hour at +20 °C (dust dry in 30 minutes at +20 °C).

CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened or cured material can only be removed mechanically.

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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Product Data Sheet

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