BUILDING TRUST

PRODUCT DATA SHEET

Sikagard®-2406 Protection

Polyurethane based, coloured protective coating for concrete structures

DESCRIPTION

Sikagard®-2406 Protection is a polyurethane based, elastic concrete protective coating.

USES

The Product is a coating suitable for:
- Principle 1: Protection against ingress
- Principle 2: Moisture control
- Principle 6: Resistance to chemicals
- Principle 8: Increasing electrical resistivity

The Product is used as:
- Protective coating on civil engineering structures.
- Protective coating on internal side of reinforced concrete shells of cooling towers.
- Elastic and crack bridging, chemically resistant protective coating.

CHARACTERISTICS / ADVANTAGES

- Permanent protection against neutral and slightly acidic gases
- Good mechanical resistance
- Weather resistant
- Complies with the requirements of EN 1504-2
- Good resistance to UV exposure
- Good resistance to chemicals
- Good resistance to abrasion
- Slightly elastic

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

PRODUCT INFORMATION

Composition	Solvent containing polyurethane based coating	
Packaging	Part A	21.25 kg
	Part B	3.75 kg
	Part A + Part B	25 kg
	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 dry conditions at temperatures between +5 °C and +25 °C. Always refer to packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.	
Appearance and colour	RAL 7030 and RAL 7032 Minor colour variations from the listed colours cannot be avoided due to the raw materials used. Other RAL colours upon request	

Density	Part A	~1.40 kg/l
	Part B	~1.06 kg/l
	Mixed resin	~1.33 kg/l
Solid content by mass	~75 %	
Solid content by volume	~62 %	
Viscosity	Part A	2200 mPa·s (D = 100 s^{-1})
	Part B	1800 mPa·s (D = 250 s^{-1})
Volatile organic compound (VOC) content	Calculated VOC	~340 g/l
	SCAQMD Method 304	~293 g/l
	ASTM D2360 - US EPA Method 24	~330 g/l

TECHNICAL INFORMATION

Abrasion resistance	93 mg (CS10 / 1000 / 1000)		(EN ISO 5470-1)
Tensile strength	7 days at +23 °C	6 MPa	(EN ISO 527-3)
	28 days at +23 °C	9 MPa	
Tensile strain at break	7 days at +23 °C	37 %	(EN ISO 527-3)
	28 days at +23 °C	19 %	
Crack bridging ability	A2 at -20°C		(EN 1062-7)
Tensile adhesion strength	7 days at +23 °C	2.5 N/mm^2	(EN 1542)
	Tested on Sikagard®-2406 Primer		
Cross cut	7 days at +23 °C	GT0	(ISO 2409)
	Tested on Sikagard®-2406 Primer		
Service temperature	*to be determined*		
Capillary absorption	<0.01 kg·m^{-2}·$h^{-0.5}$		(EN 1062-3)
Equivalent air layer thickness for water vapour	Class I: ~4 m		(EN ISO 7783)
Permeability to carbon dioxide	Equivalent air thickness	187 m	(EN 1062-6)
	Coefficient diffusion	μ = 51 4800	
Chemical resistance	Class II against sulfuric acid pH 2.5		
Behaviour after artificial weathering	No blistering and/or delamination after 2000 hours in QUV according to EN 1062-11		(EN 1062-11)
Freeze thaw de-icing salt resistance	De-icing salt immersion	2.7 MPa	(EN 13687-1)
	Thunder shower cycling	2.7 MPa	(EN 13687-2)
Reaction to fire	Class E		

SYSTEM INFORMATION

System structure

NATURAL DRAUGTH COOLING TOWER INTERIOR SIDE
Two layer system for normal load up to approx. 35 °C and condensation:

Layer	Product
Primer	1 × Sikagard®-2406 Primer
Top coat	1 × Sikagard®-2406 Protection RAL 7032

Three layer system for additional acid load due to blown-in flue gases:

Layer	Product
Primer	1 × Sikagard®-2406 Primer
Intermediate layer	1 × Sikagard®-2406 Protection RAL 7030
Top coat	1 × Sikagard®-2406 Protection RAL 7032

As Sikagard®-2406 Protection is UV resistant, an additional UV protection is NOT required in the area of continuous exposure to light (diffusers and flue above the middle).
For further reference of application in cooling tower interior shell, refer to the VGB Guidelines.
OTHER CIVIL ENGINEERING STRUCTURES (SUCH AS BRIDGES)

Layer	Product
Primer	1 × Sikagard®-2406 Primer
Top coat	1-2 × Sikagard®-2406 Protection RAL 7032 or 7030

APPLICATION INFORMATION

Mixing ratio

Part A : Part B = 85 : 15 (by weight)

Consumption

~0.3 to 0.45 kg/m² per coat
~0.32 kg/m² ≈150 µm dft

Layer thickness

Internal wall, lower half	>200 µm
Internal wall, upper half	>300 µm
Sikagard®-2406 Protection consumption	~150 µm DFT per coat

Ambient air temperature

Maximum	+30°C
Minimum	+10°C

Relative air humidity

<80 % RH

Dew point

Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation on the surface of the applied product.

Substrate moisture content

Substrate	Method method	Moisture content
Cementitious substrates	Calcium carbide method (CM-method)	≤ 4 %

No rising moisture (ASTM D4263, polyethylene sheet)

Pot Life

Temperature	Time
+10 °C	~8 hours
+20 °C	~5 hours
+30 °C	~2 hours

Waiting time to overcoating

Temperature	Sikagard®-2406 Primer	Sikagard®-2406 Protection
+10 °C	min 16 hours max 3 days	min 24 hours max 5 days
+20 °C	min 8 hours max 2 days	min 15 hours max 3 days
+30 °C	min 4 hours max 1 day	min 4 hours max 2 days

Sikagard®-2406 Protection can be overcoated with itself.

Drying time	Temperature	Drying degree grade 1	Drying degree grade 7 (trafficability by working platform)
	+8 °C	~6 hours	~6 days
	+23 °C	~3 hours	~2 days
	+30 °C	~2 hours	~1 day

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.

ECOLOGY, HEALTH AND SAFETY

REGULATION (EC) NO 1907/2006 (REACH) - MANDATORY TRAINING
As from 24 August 2023 adequate training is required before industrial or professional use of this product. For more information and a link to the training, visit www.sika.com/pu-training

DIRECTIVE 2004/42/CE LIMITATION OF EMISSIONS OF VOC

According to the EU Directive 2004/42/CE, the maximum allowed content of VOC (product category IIA / j type SB) is 500 g/l (Limits 2010) for the ready to use product.
The maximum content of Sikagard®-2406 Protection is < 500 g/l VOC for the ready to use product.

APPLICATION INSTRUCTIONS

IMPORTANT
Strictly follow installation procedures
Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

SUBSTRATE QUALITY / PRE-TREATMENT

Substrate Quality:
The surface must have sufficient load-bearing capacity (compressive strength higher or equal than 25 MPa, be dry (max 4% residual moisture), clean and free of loose, dirty and friable particles.
The surface tensile strength shall be higher or equal of 1.5 MPa.
Surface Preparation:
Layers with insufficient load-bearing capacity and loose material must be removed mechanically; old coatings must be checked with respect to whether they can be overcoated, cleaned or if required mechanically removed (e.g. using blasting technique).

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APPLICATION

1. Apply the Product by brush, roller or airless spray.

Gun pressure	190 bar
Nozzle bore hole	0.46 mm to 0.66 mm
Spraying angle	80 °

CURING TREATMENT

The Product does not require specific curing but the exposed area must be protected from rain for at least 3 hours.

CLEANING OF EQUIPMENT

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES