

PRODUCT DATA SHEET

SikaCor® Elastomastic TFN

2-PACK EPOXY-POLYURTHANE LIQUID PLASTIC



DESCRIPTION

Thick-layer, 2-pack epoxy-polyurethane liquid plastic for creating tough elastic and mechanically high resistant coatings on steel and concrete.

USES

SikaCor® Elastomastic TFN may only be used by experienced professionals.

High quality coating e.g. for bridge decks, inspection sidewalks, pavements and bicycle tracks, traffic areas, railway bridges, curbs and inside of ballast troughs. For application of thick-layer, wear-resistant, highly mechanically resistant and at the same time chemically resistant corrosion protection system. For levelling resp. producing slope surfaces to avoid standing water puddles.

CHARACTERISTICS / ADVANTAGES

- High performance corrosion protection
- Mechanical, tough elastic- and impact resistant
- Very good adhesion on steel and concrete substrates

APPROVALS / CERTIFICATES

- Approved and certified according to the German Standard ZTV-ING, part 7, chapter 5 (road surface and sidewalk).
- Approved and certified according to the German Railway Standard DBS 918084 (page 84) for riveted and welded steel bridges with ballast (ballast troughs)
- For use as an anti-slip-finish according to DIN 51130 a test report is available (anti-slip factor R 12 resp. R 13).
- Coating based on epoxy-polyurethane resin for concrete protection according to EN 1504-2 and EN 13813, DoP, with CE-mark.

PRODUCT INFORMATION

Packaging	SikaCor® Elastomastic TFN	20 kg net.
	SikaCor® HM Primer Plus	30 kg net.
	Sikafloor®-150	25 kg, 10 kg and 2.5 kg net.
	Sikafloor®-359 N	32.5 kg net.
	SikaCor® EG-5	30 kg net.
Appearance and colour	SikaCor® Elastomastic TFN	Dust grey, approx. RAL 7037
	SikaCor® HM Primer Plus	Metallic grey (approx. DB 702)
	Sikafloor®-359 N	Variety of colours
	SikaCor® EG-5	Variety of colours

Slight colour deviations are possible due to raw material characteristics.

Shelf life	2 years	
Storage conditions	In originally sealed containers in a cool and dry environment.	
Density	Density without aggregate	~1.3 kg/l
	Density with aggregate	~1.75 kg/l (quartz sand)
		~1.9 kg/l (DUROP)
Solid content	~100 % by volume ~100 % by weight	

TECHNICAL INFORMATION

Shore hardness	Shore-D hardness	~40	(ISO 868)
Chemical resistance	Water, see water, sewage water, thinned anorganic acids and bases, salt, detergents, grease, oil and short term resistant to motor fuel and solvents.		
Temperature resistance	Dry heat up to + 100°C, short term up to approx. + 250°C		

SYSTEM INFORMATION

System	<u>Coating system for sidewalks:</u>		
	1 x SikaCor® HM Primer Plus		
	1 x SikaCor® Elastomastic TFN 1:1 filled with quartz sand 0.7-1.2 mm broadcasted in excess with quartz sand 0.7-1.2 mm		
	1 x SikaCor® EG-5 or Sikafloor®-359 N (optional with coloured top sealer)		
	<u>Coating system for road surfaces:</u>		
	1 x SikaCor® HM Primer Plus		
	1 x SikaCor® Elastomastic TFN 1:1 filled with DUROP 2-3 mm broadcasted in excess with DUROP 2-3 mm		
	<u>Coating system for ballast troughs (German Railway):</u>		
	1 x SikaCor® HM Primer Plus (optional)		
	1 x SikaCor® Elastomastic TFN 1:1 filled with quartz sand 0.4-0.7 mm (optional without quartz sand) broadcasted in excess with quartz sand 0.4-0.7 mm		
	<u>Coating system for concrete:</u>		
	2 x Sikafloor®-150 first layer broadcasted with quartz sand 0.4-0.7 mm		
	1 x SikaCor® Elastomastic TFN 1:1 filled with quartz sand 0.4-0.7 mm broadcast in excess with quartz sand 0.4-0.7 mm		

APPLICATION INFORMATION

Mixing ratio	By weight	Components A : B
	SikaCor® Elastomastic TFN	40 : 60
	SikaCor® HM Primer Plus	90 : 10
	Sikafloor®-150	74 : 26
	Sikafloor®-359 N	78 : 22
	SikaCor® EG-5	90 : 10

For road surface and side walk according to ZTV-ING, part 7, chapter 5:

	Pavements and bicycle tracks	Road surface
Primer coat:	SikaCor® HM Primer	SikaCor® HM Primer
Theoret. consumption:	Plus: ~0.176 kg/m ²	Plus: ~0.176 kg/m ²
Top coat:	SikaCor® Elastomastic TFN	SikaCor® Elastomastic TFN
Layer thickness:	≥ 4 - 6 mm	≥ 6 - 10 mm
Mixing ratio* ¹⁾		
binder/aggregate:	1 : 1* ¹⁾	1 : 1* ¹⁾
Aggregate and broadcasting material	quartz sand 0.7-1.2 mm* ²⁾	DUROP 2-3 mm* ³⁾ * ⁴⁾
Theoretical material consumption	for 6 mm thickness ~4.5 kg/m ² binder ~4.5 kg/m ² aggregate ~3.0 kg/m ² broadcasting material	for 10 mm thickness ~8.5 kg/m ² binder ~8.5 kg/m ² aggregate ~4.0 kg/m ² broadcasting material
Practical broadcasting material consumption	~6 kg/m ²	~8 kg/m ²
Coloured top sealer (optional)	1 x SikaCor® EG-5 ~0.5 - 0.7 kg/m ² 1 x Sikafloor®-359 N ~0.65 - 0.75 kg/m ²	

*1) If application temperatures are lower than +15°C the addition of aggregate can be reduced down to a ratio of 1 : 0.7.

*2) 2 layer system: The aggregate for filling the 1st and 2nd layer and for broadcasting the 1st layer (not in excess) is quartz sand 0.4-0.7 mm. The 2nd layer has to be broadcasted with quartz sand 0.7-1.2 mm.

*3) 2 layer system: The aggregate for filling the 1st and 2nd layer and for broadcasting the 1st layer (not in excess) is DUROP 1/2. The 2nd layer has to be broadcasted with DUROP 2/3.

*4) Source of DDUROP: KORODUR Westphal Hartbeton GmbH & Co.KG
info@korodur.de / www.korodur.de

Before applying the 2nd layer the non-adherent bonded quartz sand resp. DUROP has to be brushed off.

For slope surfaces 0.5-1.5 % by weight Extender T (related to ready mixed material) must be added to prevent sagging; the dosage depends on the ambient and material temperature.

For ballast troughs according to DBS 918084 (German Railway):

SikaCor® Elastomastic TFN not filled with quartz sand:

Optional 1 x SikaCor® HM Primer Plus, dry film thickness 80 µm

Horizontal surfaces: Layer thickness 4 mm.

Apply SikaCor® Elastomastic TFN in 3 mm, consumption

approx. 3.9 kg/m².

Broadcasting with quartz sand 0.4-0.7 mm in excess (8-10 kg/m²).

Vertical surfaces: Layer thickness 2 mm.

Apply SikaCor® Elastomastic TFN in two layers, 1 mm each by adding

2-3 % b.w. Extender T, consumption approx. 1.3 kg/m² per layer.

Broadcasting with quartz sand 0.4-0.7 mm after each layer.

SikaCor® Elastomastic TFN, filled with quartz sand:

Optional 1 x SikaCor® HM Primer Plus, dry film thickness 80 µm

Horizontal surfaces: Layer thickness 4 mm.Apply SikaCor® Elastomastic TFN, 1:1 filled with quartz sand 0.4-0.7 mm in 4 mm. Consumption of binder and quartz sand each approx. 3.0 kg/m². Broadcasting with quartz sand 0.4-0.7 mm in excess (6 kg/m²).Vertical surfaces: Layer thickness 2 mm.

Apply SikaCor® Elastomastic TFN, 1:1 filled with quartz sand 0.4-0.7 mm in two layers, 1 mm each by adding 2-3 % b.w. Extender T.

Consumption of binder and quartz sand each approx. 0.75 kg/m² per layer. Broadcasting with quartz sand 0.4-0.7 mm after each layer.For concrete surfaces:

System	Product	Material consumption
1 st Primer coat:	Sikafloor®-150 broadcasted with quartz sand 0.4-0.7mm	~0.4 kg/m ² ~1.2 kg/m ²
2 nd Primer coat:	Sikafloor®-150	~0.4 kg/m ²
Top coat: horizontal: 5 - 6 mm binder aggregate broadcasting	SikaCor® Elastomastic TFN quartz sand 0.4-0.7 mm quartz sand 0.4-0.7 mm	for 6 mm thickness ~4.5 kg/m ² ~4.5 kg/m ² ~6.0 kg/m ²
Top coat: vertical: 3 mm binder aggregate broadcasting	SikaCor® Elastomastic TFN quartz sand 0.4-0.7 mm quartz sand 0.4-0.7 mm	for 3 mm thickness ~2.5 kg/m ² ~2.5 kg/m ² ~2.0 kg/m ²
Coloured top sealer (optional):	1 x SikaCor® EG-5 1 x Sikafloor®-359 N	~0.5 - 0.7 kg/m ² ~0.65 - 0.75 kg/m ²

Material temperature

	Min. / Max.
SikaCor® Elastomastic TFN	+ 10°C / + 40°C
SikaCor® HM Primer Plus	+ 5°C / + 40°C
Sikafloor®-150	+ 10°C / + 30°C
Sikafloor®-359 N	+ 10°C / + 30°C
SikaCor® EG-5	+ 5°C / + 30°C

Relative air humidity

Max. 85 %, expect the surface temperature is significantly higher than the dew point temperature, it shall be at least 3 K above dew point.

Surface temperature

	Min.
SikaCor® Elastomastic TFN	+ 10°C
SikaCor® HM Primer Plus	+ 5°C
Sikafloor®-150	+ 10°C
Sikafloor®-359 N	+ 10°C
SikaCor® EG-5	+ 5°C

Pot Life

	At + 10°C	At + 20°C	At + 30°C
SikaCor® Elasto- mastic TFN	~1.5 h	~1 h	~30 min
SikaCor® HM Primer Plus	~12 h	~8 h	~5 h
Sikafloor®-150	~1 h	~30 min	~15 min
Sikafloor®-359 N	~40 min	~25 min	~15 min
SikaCor® EG-5	~7 h	~5 h	~4 h

PRODUCT DATA SHEETSikaCor® Elastomastic TFN
January 2022, Version 01.02
020602000080000013

Waiting time to overcoating

Between SikaCor® HM Primer Plus and SikaCor® Elastomastic TFN:
Min. 1 day, max. 1 month. Prime once again with 1 x SikaCor® HM Primer Plus in case of longer waiting time.

Between 1st and 2nd layer of SikaCor® Elastomastic TFN:
Min.1 day, max. 1 month

Between SikaCor® Elastomastic TFN and SikaCor® EG-5 or Sikafloor®-359 N
Min. 1 day, max. 1 month

Between 1st and 2nd layer of Sikafloor®-150:
Min.12 hours, max. 2 days

Between Sikafloor®-150 and SikaCor® Elastomastic TFN:
Min. 12 hours at + 20°C, max. 2 days

Prior to application of the next layer a thorough dedusting is necessary. If the waiting time between the layers of SikaCor® Elastomastic TFN will be longer as mentioned above, than the coating has to be prepared by sweep blasting before applying SikaCor® Elastomastic TFN again.

Drying time

SikaCor® Elastomastic TFN	Ready for food traffic
+ 10°C after	~48 h
+ 15°C after	~20 h
+ 20°C after	~12 h
+ 30°C after	~6 h

Final drying time

Fully cured after 7 days at + 20°C.
Ballast can be placed after 3 days.

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 PREPARATION

Concrete:

- Concrete substrates must be structurally sound and of sufficient compressive strength (min. 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².
- The substrate must be clean, dry and free of all contaminants such as dirt, dust, oil, grease, coatings, laitance and loose friable material.
- Concrete substrates and PCC mortars must be prepared mechanically using suitable abrasive blast-cleaning or scarifying equipment to remove cement laitance and achieve an open textured gripping surface profile.
- Moisture content of substrate < 4 % b.w.

SURFACE PREPARATION

Steel:

- Blast-cleaning to Sa 2 ½ according to ISO 12944-4 (ISO 8501-1)
- Free from dust, dirt, oil and grease
- Surface profile „medium (G)” acc. to ISO 8503-2, roughness Rz ≥ 50 µm
- For ballast troughs acc. to DBS 918084 surface profile coarse (G) is required.

MIXING

Stir component A very thoroughly using an electric mixer (start slowly, then increase up to approx. 300 rpm). Add component B carefully and mix both components very thoroughly (including sides and bottom of the container). Mix for at least 3 minutes until a homogeneous mixture is achieved. Fill mixed material into clean container, add the aggregates if necessary and mix again shortly as described above. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothings.

APPLICATION

Apply SikaCor® Elastomastic TFN by using a trowel, kaupp trowel, squeegee, serrated trowel or similar. Overroll the freshly applied layer with a spike roller and broadcast with quartz sand approx. 15 minutes after application (at + 20°C).

PRODUCT DATA SHEET

SikaCor® Elastomastic TFN
January 2022, Version 01.02
020602000080000013

Do not thin SikaCor® Elastomastic TFN!

CLEANING OF EQUIPMENT

Sika® Thinner EG or SikaCor® Cleaner

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 the 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

SikaCor® Elastomastic TFN
January 2022, Version 01.02
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