

## PRODUCT DATA SHEET

# SikaCor® Elastomastic TF

SOLVENT-FREE 2-PACK EPOXY-POLYURETHANE LIQUID PLASTIC COATING



### DESCRIPTION

Solvent-free thick-layer, 2-pack epoxy-polyurethane liquid plastic coating for the manufacturing of tough elastic and mechanically high resistant coatings on steel and concrete.

Solvent-free according to Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).

### USES

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

- High quality coating e.g. for steel bridge decks, inspection sidewalks, pavement 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
- Crack bridging in the system (OS 10) according to IV T+V (DAFStb guideline)

### 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 on concrete bridges with ballast an approval of the TU Munich is available.
- For use as surface protection system according to the DAFStb guideline an approval is available.
- For use as an anti-slip-finish acc. 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: 2004 and EN 13813: 2002, DoP, with CE-mark.

### PRODUCT INFORMATION

#### Packaging

SikaCor® Elastomastic TF	20 kg net.
SikaCor® HM Primer	30 kg net.
Sikafloor®-150	25 kg net.
Sikafloor®-359 N	32.5 kg net.

#### Appearance / Colour

SikaCor® Elastomastic TF	Dust grey, approx. RAL 7037
SikaCor® HM Primer	Metallic grey (approx. DB 702)
Sikafloor®-359 N	Variety of colours

Slight colour deviations are possible due to raw material characteristics.

Shelf life	24 months from date of production	
Storage conditions	In originally sealed containers in a cool and dry environment.	
Density	Density without aggregate	~1.2 kg/l
	Density with aggregate	~1.6 kg/l (0.4 - 0.7 mm quartz sand)
Solid content	~100 % by volume	

## TECHNICAL INFORMATION

Shore Hardness	Shore-D-hardness	~40
Chemical Resistance	Water, sea 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	

## SYSTEMS

Systems	<p><u>Coating system for sidewalks:</u> 1 x SikaCor® HM Primer x 1 SikaCor® Elastomastic TF, 1:1 filled with quartz sand 0.7 - 1.2 mm. Broadcast in excess with quartz sand 0.7 - 1.2 mm 1 x Sikafloor®-359 N (optional with coloured top sealer)</p> <p><u>Coating system for road surfaces:</u> 1 x SikaCor® HM Primer x 1 SikaCor® Elastomastic TF, 1:1 filled with Durop 2 - 3 mm. Broadcast in excess with Durop 2 - 3 mm</p> <p><u>Coating system for ballast troughs (German Railway):</u> 1 x SikaCor® HM Primer (optional) x 1 SikaCor® Elastomastic TF (filled with or not with quartz sand 0.4 - 0.7 mm). Broadcast in excess with quartz sand 0.4 - 0.7 mm.</p> <p><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 TF, 1:1 filled with quartz sand 0.4 - 0.7 mm. Broadcast in excess with quartz sand 0.4 - 0.7 mm.</p> <p><u>Coating system OS 10 according to the DAfStb guideline for car parks and underground garages</u></p> <p><u>Sika® CarDeck Professionell TF N:</u> 1 x Sikafloor®-161, broadcasted with quartz sand 0.3 - 0.8 mm, 1 x Sikalastic®-851 (machine application), 1 x SikaCor® Elastomastic TF, filled with quartz sand 0.3 - 0.8 mm. Broadcast in excess with quartz sand 0.7 - 1.2 mm, 1 x Sikafloor®-378.</p> <p><u>Sika® CarDeck Professionell M:</u> 1 x Sikafloor®-161, broadcasted with quartz sand 0.3 - 0.8 mm, 1 x Sikafloor®-350 N Elastic (manual application), 1 x SikaCor® Elastomastic TF, filled with quartz sand 0.3 - 0.8 mm. Broadcast in excess with quartz sand 0.7 - 1.2 mm, 1 x Sikafloor®-378.</p>
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## APPLICATION INFORMATION

Mixing Ratio	By weight	Components A : B
	SikaCor® Elastomastic TF	40 : 60
SikaCor® HM Primer	90 : 10	
Sikafloor®-150	74 : 26	
Sikafloor®-359 N	78 : 22	

Consumption	<b>For road surface and side walk according to ZTV-ING, part 7, chapter 5:</b>	
	<b>Pavements and bicycle tracks</b>	<b>Road surface</b>
Primer coat:	SikaCor® HM Primer	SikaCor® HM Primer
Theoret. consumption:	~0.215 kg/m <sup>2</sup>	~0.215 kg/m <sup>2</sup>
	SikaCor®	SikaCor®
Top coat:	Elastomastic TF	Elastomastic TF
Layer thickness:	≥ 4 - 6 mm	≥ 6 - 10 mm
Mixing ratio* <sup>1)</sup>		
binder/aggregate:	1 : 1* <sup>1)</sup>	1 : 1* <sup>1)</sup>
Aggregate and broadcasting material	quartz sand 0.7 - 1.2 mm* <sup>2)</sup>	Durop 2 - 3 mm* <sup>3)</sup> * <sup>4)</sup>
Theoretical material consumption per mm layer thickness	~0.7 kg/m <sup>2</sup> binder ~0.7 kg/m <sup>2</sup> aggregate ~1.4 kg/m <sup>2</sup> material	~0.65 kg/m <sup>2</sup> binder ~0.65 kg/m <sup>2</sup> aggregate ~1.30 kg/m <sup>2</sup> material
Material consumption broadcasting material	~6 kg/m <sup>2</sup>	~8 kg/m <sup>2</sup>
Coloured top sealer (optional)	1 x Sikafloor®-359 N ~0.65 - 0.75 kg/m <sup>2</sup>	

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

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

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

\*<sup>4)</sup> Source of Durop: Korodur International GmbH, 92224 Amberg, info@korodur.de

Before applying the 2<sup>nd</sup> layer the non-adherent bonded quartz sand 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 TF not filled with quartz sand:**

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

Horizontal surfaces: Layer thickness 4 mm.

Apply SikaCor® Elastomastic TF in 3 mm, consumption approx. 3.6 kg/m<sup>2</sup>.  
Broadcasting with quartz sand 0.4 - 0.7 mm in excess (8 - 10 kg/m<sup>2</sup>).

Vertical surfaces: Layer thickness 2 mm.

Apply SikaCor® Elastomastic TF in two layers, 1 mm each by adding 2 - 3 % b.w. Extender T, consumption approx. 1.2 kg/m<sup>2</sup> per layer.  
Broadcasting with quartz sand 0.4 - 0.7 mm after each layer.

**SikaCor® Elastomastic TF, filled with quartz sand:**

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

Horizontal surfaces: Layer thickness 4 mm.Apply SikaCor® Elastomastic TF, 1:1 filled with quartz sand 0.4 - 0.7 mm in 4 mm. Consumption of binder and quartz sand each approx. 2.8 kg/m<sup>2</sup>. Broadcasting with quartz sand 0.4 - 0.7 mm in excess (6 kg/m<sup>2</sup>).Vertical surfaces: Layer thickness 2 mm.

Apply SikaCor® Elastomastic TF, 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 approx. 0.7 kg/m<sup>2</sup> per layer.

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

**For concrete bridges:**

System	Product	Material consumption
1 <sup>st</sup> Primer coat:	Sikafloor®-150	~0.4 kg/m <sup>2</sup>
	broadcasted with quartz sand 0.4-0.7mm	~1.2 kg/m <sup>2</sup>
2 <sup>nd</sup> Primer coat:	Sikafloor®-150	~0.4 kg/m <sup>2</sup>
Top coat:	SikaCor®	
horizontal: 5 - 6 mm	Elastomastic TF	0.8 kg/m <sup>2</sup> per
vertical: 3 mm		1 mm film thickness
Aggregate for top coat:	quartz sand 0.4 - 0.7 mm	0.8 kg/m <sup>2</sup> per
Broadcasting for top coat:	quartz sand 0.4 - 0.7 mm	1 mm film thickness
		~6.0 kg/m <sup>2</sup>
Coloured top sealer (optional):	1 x Sikafloor®-359 N	~0.65 - 0.75 kg/m <sup>2</sup>

For coating system OS 10 according to DAfStb:Sika CarDeck Professionell TF N:

System	Product	Material consumption*1)
Primer coat:	Sikafloor®-161 + broadcasted with quartz sand 0.3-0.8 mm	~0.4 kg/m <sup>2</sup>
Intermediate layer	Sikalastic®-851	~2.4 - 2.8 kg/m <sup>2</sup>
Wearing layer	SikaCor® Elastomastic TF + filled with quartz sand 0.3 - 0.8 mm	~5.0 kg/m <sup>2</sup> *2)
Broadcasting:	Quartz sand 0.7-1.2mm	Broadcast in excess
Top coat:	Sikafloor®-378	~0.6 kg/m <sup>2</sup>

Sika CarDeck Professionell M:

System	Product	Material consumption*1)
Primer coat:	Sikafloor®-161 + broadcasted with quartz sand 0.3-0.8 mm	~0.4 kg/m <sup>2</sup>
Intermediate layer	Sikalastic®-350 N Elastic	~2.5 kg/m <sup>2</sup>
Wearing layer	SikaCor® Elastomastic TF + filled with quartz sand 0.3 - 0.8 mm	~5.0 kg/m <sup>2</sup> *2)
Broadcasting:	Quartz sand 0.7-1.2mm	Broadcast in excess
Top coat:	Sikafloor®-378	~0.6 kg/m <sup>2</sup>

\*1) Depending on ambient and processing conditions, other material consumption values may be required to maintain the desired layer thicknesses.

\*2) Depending on the ambient and substrate temperature the mixing ratio must be adjusted according to the following table.

\*3) Depending on the project conditions, deviations may occur.

**Consumption depending on ambient and substrate Temperature**

Ambient and substrate temperature	< 15°C	15°C - < 25°C	> 25°C
Mixing Ratio			
TF : quartz sand	1 : 0.5	1 : 0.7	1 : 1
Consumption			
Elastom. TF	~3.4 kg/m <sup>2</sup>	~3.0 kg/m <sup>2</sup>	~2.5 kg/m <sup>2</sup>
quartz sand	~1.7 kg/m <sup>2</sup>	~2.1 kg/m <sup>2</sup>	~2.5 kg/m <sup>2</sup>

**Product Temperature**

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

**Pot Life**

	At + 10°C	At + 20°C	At + 30°C
SikaCor® Elastomastic TF	~ 1,5 h	~ 1 h	~ 30 min
SikaCor® HM Primer	~ 12 h	~ 8 h	~ 5 h
Sikafloor®-150	~ 1 h	~ 30 min	~ 15 min
Sikafloor®-359 N	~ 40 min	~ 25 min	~ 15 min

**Waiting Time / Overcoating**

Between SikaCor® HM Primer and SikaCor® Elastomastic TF:

Min. 1 day, max. 1 month

Prime once again with 1 x SikaCor® HM Primer in case of longer waiting time.

Between Sikafloor®-150 and SikaCor® Elastomastic TF:

Min. 8 hours at + 20°C, max. 2 days

Between 1<sup>st</sup> and 2<sup>nd</sup> layer of SikaCor® Elastomastic TF:

Min.1 day, max. 1 month

Between SikaCor® Elastomastic TF and Sikafloor®-359 N:

Min. 1 day, max. 1 month

Prior to application of the next layer a thorough dedusting is necessary.

If the waiting time between the layers of SikaCor® Elastomastic TF will be longer as mentioned above, than the coating has to be prepared by sweep-blasting before applying SikaCor® Elastomastic TF again.

## Drying time

SikaCor® Elastomastic TF	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.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

#### Concrete:

Concrete substrates must be sound and of sufficient compressive strength (min. 25 N/mm<sup>2</sup>) with a minimum pull off strength of 1.5 N/mm<sup>2</sup>. The substrate must be clean, dry (substrate moisture < 4 CM%) and free of all contaminants such as dirt, dust, oil, grease, loose and friable particles.

Concrete substrates and PCC mortars must be prepared mechanically using abrasive blast-cleaning or scarifying equipment.

### 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 cloths.

### APPLICATION

Apply SikaCor® Elastomastic TF by using a trowel, kaupp trowel, squeegee, serrated trowel or similar. Overroll the freshly applied layer with a spike roller and blind with quartz sand approx. 15 minutes after application.

**Do not thin SikaCor® Elastomastic TF!**

### CLEANING OF EQUIPMENT

Removal of fresh remnants from tools and application equipment can be carried out using Sika® Thinner EG or SikaCor® Cleaner immediately after use. Hardened /

cured material can only be mechanically removed.

## 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.

## LOCAL RESTRICTIONS

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

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

### 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 SikaCor® Elastomastic TF is < 500 g/l VOC for the ready to use product.

## 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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