

# Sikaflex<sup>®</sup>-Tank

**Single-component elastic joint-sealing system for storage/filling/handling facilities for water-polluting liquids, approval no. Z-74.6-6**

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**Product description:** Sikaflex-Tank is a non-sag single-component polyurethane-based sealant for floor joints. It is used in areas for the storage, filling and handling of water-polluting liquids. Sikaflex-Tank reacts with moisture to an elastic sealant.

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**Fields of application:**

- **Floor and perimeter joints in areas exposed to chemicals**
  - Facilities for storage, filling and handling of water-polluting liquids, e.g. filling stations, handling areas/yards, storage tanks and bunds, barrel stores
  - in water pollution control
- **Floor joints in petrol stations**
- **Floor- and connection joints according to IVD data sheet no. 1**  
e.g. in workshops and parking garages

Sikaflex -Tank must not be used for swimming pool joints.

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**Properties:**

- **Technically approved joint-sealing system for use in storage/filling/handling facilities for water-polluting liquids, DIBt approval no. Z-74.6-6**
- **Single-component, ready-to-use, no mixing**
- **movement capability 25%**
- **High chemical resistance**
- **High mechanical resistance**
- **High tear propagation resistance**
- **Non-sag**
- **Excellent application properties**

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**Packaging:** 600 ml unipac (1 box = 20 sausages).

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**Colour:** Concrete grey

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**Shelf life:** **15 months.**  
In original containers, in cool and dry environment at temperatures between +10°C and +25°C:

**Technical data:**

Characteristic values		Comments
Chemical base:	Polyurethane, 1-comp.	
Specific gravity:	1.25 g/ml	DIN 53 479 B
Movement capability	25%	
Sag resistance:	very good	DIN EN 27 390-U 20
Curing speed:	> 2.5 mm/24 h	23°C / 50% rH
Skimming time:	60-120 min	23°C / 50% rH
Application temperature:	+5°C to +40°C	Substrate temperature
Curing time:	approx. 7-14 days (depending on weather and joint width/depth)	Up to achievement of full mechanical and chemical resistance
Service temperature:	-40°C to +70°C	
Elastic recovery:	approx. 85%	DIN EN 27 389
Shore-hardness A:	approx. 35	as per DIN 53 505
Tensile stress at 100% elongation:	approx. 0.4 MPa (23°C)	DIN EN 28 339-B
Tear propagation resistance:	approx. 8 N/mm	DIN 53 515

**Chemical resistance:****Table 1:**

**List of liquids for which the joint-sealing system is impermeable and resistant for up to 72 h (medium duty). For these liquids Sikaflex Tank is approved according to TRwS (Technical Rules on Substances Hazardous to Water) for sealing surfaces in storage/filling/handling facilities for water-polluting liquids.**

Group no.*	Liquids
DF 1	Petrol (gasoline) for motor vehicles to DIN 51600 and DIN EN 228
DF 2	Aviation fuels
DF 3	Extra-light heating oil (to DIN 51603-1), diesel fuel (to DIN EN 590), unused internal combustion engine oils and unused vehicle gear oils, mixtures of saturated and aromatic hydrocarbons with an aromatic content ≤ 20% by weight and a flash point > 55°C
DF 4	All hydrocarbons
DF 4a	Benzene and benzene-containing mixtures
DF 4b	Crude oils
DF 4c	Unused internal combustion engine oils and unused vehicle gear oils with a flash point > 55°C
DF 5	Monohydric and polyhydric alcohols (up to max. 48% by volume methanol), glycol ethers
DF 5a	All alcohols and glycol ethers
DF 5b	Monohydric and polyhydric alcohols ≥ C <sub>2</sub>
DF 11	Inorganic alkalis and alkaline-hydrolysing inorganic salts in aqueous solution (pH > 8), excluding ammonia solutions and oxidising salt solutions (e.g. hypochlorite)

**Table 2:**

**List of liquids for which the joint-sealing system is impermeable and chemical for up to 3 months (heavy duty). For these liquids Sikaflex Tank is approved to TRwS (Technical Rules on Substances Hazardous to Water) for sealing surfaces in storage/filling/handling facilities for water-polluting liquids.**

Group no.*	Liquids
DF 3	Extra-light heating oil (to DIN 51603-1), diesel fuel (to DIN EN 590), unused internal combustion engine oils and unused vehicle gear oils, mixtures of saturated and aromatic hydrocarbons with an aromatic content ≤ 20% by weight and a flash point > 55°C
DF 11	Inorganic alkalis and alkaline-hydrolysing inorganic salts in aqueous solution (pH > 8), excluding ammonia solutions and oxidising salt solutions (e.g. hypochlorite)

\*) as specified in approval guidelines for joint-sealing systems in storage/filling/handling facilities for water-polluting liquids, Part 1. See DIBt (German Institute for Construction Technology) documentation, Book 16. 1

**Preparation and design:**

**Joint design:** The relevant technical rules for joints with elastic sealants have to be considered.

All joint sealing in storage/filling/handling facilities for water-polluting liquids and in water pollution control have to be made according to the national technical approval for Sikaflex-Tank (no. Z-74.6-6) and its annexes. Installation of the joint-sealing system in storage/filling/handling facilities for water-polluting liquids have to be made only by operators who are approved according to §19 I of the WHG (German Water Resources Management Law) and have received instruction from the manufacturer.

To avoid damage to sharp edges in in-situ concrete a chamfer (approx. 3-5 mm) should be provided to the sides of the joint.

**Joint sizing:** Minimum joint width 10 mm. Control joints < 10 mm are for crack control and therefore that are no joints in the sense of the IVD (German Sealant Manufacturers' Association) data sheet no. 1. Relevant is the joint width at the time of the application of the sealant (guide value of +10°C).

We recommend for internal areas (temperature difference of 40K):

Joint spacing (m)	2.0	3.0	4.0	5.0	6.0	8.0
Minimum joint width (mm)	12	12	12	12	12	15
Sealant thickness (mm)	12	12	12	12	12	12

We recommend for external areas (temperature difference of 80K):

Joint spacing (m)	2.0	3.0	4.0	5.0	6.0	8.0
Minimum joint width (mm)	12	12	15	18	20	30
Sealant thickness (mm)	12	12	12-15	15	17	25

The recommendation consider only the longitudinal thermal movement of the concrete elements. If additional movement is expected (e.g. vibration, settlement or horizontal displacement) the joints have to adapted accordingly.

Joints must be properly dimensioned as changes are normally no longer possible after construction. Basis for calculation of the necessary joint width are the technical characteristic values of the joint sealer and the adjacent building materials, the exposure of the building elements, their construction and size.

**Joint detailing:**

Proposals for floor joint detailing:

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The flush joint design rules out trip hazards and dirt traps.	The recessed joint design protects the sealant against mechanical loads.
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See also Annex 1 of the DIBt (German Institute for Construction Technology) national technical approval (no. Z-74.6-6).

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**Substrate:**

The Sikaflex-Tank joint-sealing system is approved for application on uncoated liquid proof precast concrete elements with a national technical approval for use in storage/filling/handling facilities for water-polluting liquids or grade B 35 B II in-situ concrete to DIN 1045 as "FD" (liquidproof) concrete or "FDE" (penetration-tested liquidproof) concrete. Condition of substrate: Clean and dry, free from dust and loose particles or surface treatments. Paint, laitance and other purely adhering particles must be removed by grinding. Clean joints with compressed air. The substrate temperature must be 3°C above the dew point.

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**Primers:**

**Sika Primer 3** for porous, absorbent materials such as concrete and polymer concrete. Flash-off time: min. 30 minutes, max. 8 h. (The primer is part of the approved joint-sealing system.)

**Sika Primer 21** for PVC;  
flash –off time: min. 30 minutes, max. 8 h.

**Sika Primer 35** for aluminium, stainless steel, galvanised steel;  
flash –off time: min. 30 minutes, max. 8 h.

**Pre-treatment for Sikafloor water protection systems:**

**Sika Primer 3** for: Sikafloor 381/381 AS; Sikafloor 390/390 AS and Sikafloor 400.  
Cleaning of the joints before priming is recommended e.g. with Cleaner 5. It must be ensured that the coats are fully cured. Before priming beads or runs in the coating have to be removed. The coating must have adequate strength and adhesion to the substrate. (The Sikafloor water protection systems not form part of the national technical approval for the joint-sealing system.)

Primers are only adhesion promoters. They are not substitutes for cleaning the surfaces nor can they improve their strength significantly. For further information see our Sikaflex Primer table.

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**Back-up material:**

Use only closed cell polyethylene foam profiles like Sika Foam Backer PE

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**Material consumption:** The following table gives an indication of running metres of joint one may seal with one 600 ml unipac.

Joint length (m) per 600 ml unipac					
Joint depth	Joint width (mm)				
d (mm)	12	15	18	20	30
12	4.0	3.0			
15		2.5	2.0		
17				1.8	
20					0.8

The stated values are indications only.

**Workmanship:** Level off the sealant surface by using a spatula, while pressing the sealant against the bonding surfaces and foam backer. Where necessary, the surface can smoothed with Sika Smoothing Solution

Elastic sealants should not be overpainted in general

**Precautionary measures:** Keep containers tightly closed in dry environment. Observe regulations on label.  
Consult and follow guidelines on the Material Safety Data Sheet

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