

Sikaflex[®] Tank N

1-part Elastic Sealants for Joints Exposed to Chemicals

Product Description / Uses	Sikaflex [®] Tank N is a one part, moisture curing, elastic joint sealant which is used in areas for the storage, filling and handling of water polluting liquids such as: Floor joints in petrol stations, joints in handling areas, storage tanks and containment bunds, movement- and connection joints according to IVD data sheet no. 1. I. E. in workshops and parking garages
Characteristics / Advantages	<ul style="list-style-type: none">■ High chemical resistance■ High mechanical resistance■ Movement capability of 25% (ISO 9047)■ Excellent application properties
Approvals / Standards	European Technical Approval ETA-09/0272 , used in facilities for the storage, handling and filling of substances hazardous to water Potable water approved (AS4020)
Product Data	
Colours	Concrete grey
Packaging	600 ml foil pack, 20 foil packs per box
Storage Conditions / Shelf-Life	12 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between +5°C and +25°C.

Construction



Technical Data

Chemical Base	Polyurethane	
Density	1.50 kg/l approx.	(CQP ¹ 006-4, ISO 1183-1)
Sag Flow	0 mm (20 mm profile, 50°C)	(CQP 061-4, ISO 7390)
Skin Time	90 minutes approx. ²⁾	(CQP 019-1)
Curing Rate	2.5 mm/24 h approx. ²⁾	(CQP 049-2)
Movement Capability	±25%	(ISO 9047)
Shore A Hardness	35 after 28 days approx. ²⁾	(CQP 023-1, ISO 868)
Tear propagation resistance	8.0 N/mm approx. ²⁾	(CQP 045-1, ISO 34)
Secant Tensile Modulus	0.6 N/mm ² approx. at 100% elongation ^{2), 3)}	(CQP 020-1, ISO 8339)
Elongation at Break	700% approx. ²⁾	(CQP 036-1, ISO 37)
Elastic Recovery	> 80% ^{2), 3)}	(ISO 7389)
Application Temperature	+5°C to +40°C, min. 3°C above dew point	
Service Temperature	-40°C to +70°C	

Chemical Resistance

List of liquids for which the joint-sealing system is impermeable and resistant for up to 72 hrs. (medium duty). For these liquids Sikaflex®-Tank N 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 + 1 a	Petrol (Gasoline) for motor vehicles to DIN 51600 and DIN EN 228
DF 2	Aviation fuels
DF 3+ 3 a+3b	Extra-light heating oil (DIN 51603-1), diesel fuel (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	Used internal combustion engine oils and used 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 ₂ .
DF 11	Inorganic alkalis and alkaline-hydrolysing inorganic salts in aqueous solutions (pH > 8), excluding ammonia solutions and oxidising salt solutions (i. e. 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

¹⁾ Sika Corporate Quality Procedure

²⁾ 23°C / 50% r.h.

³⁾ conditioning: Method B

Application Details

Joint Design/ Consumption

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 technical approval for Sikaflex®-Tank N (ETA-09/0272) and its annexes. 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.

The joint width must be designed to suit the movement capability of the sealant. In general the joint width should be >10 mm < 35 mm. A width to depth ratio of approx. 1:1 must be maintained.

Standard joint widths for joints between concrete elements: with a ΔT^* of 40 °C

Joint distance [m]	2	4	6	8	10
Min. joint width [mm]	10	10	10	15	20
Min. joint depth [mm]	10	10	10	12	15

with a ΔT^* of 80 °C

Joint distance [m]	2	4	6	8	10
Min. joint width [mm]	10	15	18	20	30
Min. joint depth [mm]	10	12	15	18	25

* ΔT is considered to be the difference between the highest expected temperature in use (or lowest, check which case leads to higher ΔT) and the application temperature.

All joints must be properly designed and dimensioned in accordance with the relevant standards, before construction. Basis for calculation of the necessary joint width are the technical values of the joint sealant and the adjacent building materials, as well as the exposure of the building, type of construction and its dimensions.

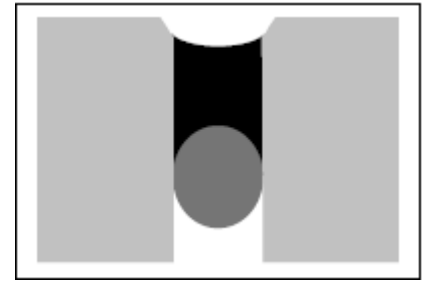
Approximate consumption

Joint width [mm]	10	15	20	25	30
Joint depth [mm]	10	12	16	20	24
Joint length / 600 ml [m]	6	3.3	1.9	1.2	0.8

Backing: Use closed cell, polyethylene foam backing rods.



Flush joint design rules out trip hazards and dirt traps



Recessed joint design protects the sealant against mechanical loads

See also Annex 1 of the DIBt (German institute for Construction Technology) national technical approval (no. Z-74.6-73).

Substrate Preparation / Priming	<p>Surfaces must be clean, dry and free from oil, grease and dust, loose or friable particles. Cement laitance has to be removed. Grinding the surface of non-porous substrates with an abrasive pad very fine may improve the adhesion performance.</p> <p>The Sikaflex®-Tank N joint sealing system is approved for application on uncoated liquid proofed precast concrete elements with a technical approval for use in storage / filling/ handling facilities for water-polluting liquids or grade \geqC35/C45, \leqC50/60 (EN 206-1) in-situ concrete to DIN 1045 as "FD" (liquid proof) concrete or "FDE" (penetration-tested liquid-proof) concrete.</p> <p><u>Non-porous substrates</u></p> <p>Glazed tiles, powder coated metals, aluminium, anodised aluminium, stainless steel and galvanised steel have to be treated with an abrasive pad very fine and Sika® Aktivator-205 using a clean towel. Before sealing allow a flash-off time of at least 15 min.</p> <p>All metal surfaces not mentioned above have to be treated with an abrasive pad very fine and Sika® Primer-3 N using a clean brush or roller. Before sealing allow a flash-off time of at least 30 min. (max. 8 h).</p> <p>PVC has to be pre-treated with Sika® Primer-215 by using a clean brush. Before sealing allow a flash-off time of at least 30 min (max. 8 h).</p> <p><u>Porous substrates</u></p> <p>Concrete, aerated concrete and cementitious renders, mortars, brick, natural stone etc. have to be primed with Sika® Primer-215 for uses according to ETA-09/0272 or Sika® Primer-3 N by using a clean brush or roller. Before sealing allow a flash-off time of at least 30 min. (max. 8 h).</p> <p>Primers are adhesion promoters. They neither substitute the correct cleaning of the surface nor improve its strength significantly. Primers improve the long term performance of a sealed joint.</p> <p>For further information please contact our Technical Service.</p> <p>Pre-treatment for Sikafloor water protecting systems: <i>Sika® Primer-3 N: For Sikafloor 381 / 381 AS; Sikafloor 390 / 390 AS and Sikafloor 400. Cleaning of the floor is recommended e. g. with Sika® Colma Cleaner. 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 form not part of the national technical approval for the joint-sealing system).</i></p>
Application Method / Tools	<p>Sikaflex® Tank N is supplied ready to use.</p> <p>After suitable substrate preparation, insert backing rod to the required depth and apply primer if necessary. Insert foil pack into sealant gun and extrude Sikaflex® Tank N into joint making sure that it is in full contact with the sides of the joint and avoid air entrapment. Sikaflex® Tank N must be tooled firmly against joint sides to ensure good adhesion.</p> <p>Masking tape may be used where exact joint lines or exceptionally neat lines are required. Remove the tape within the skin time. Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surfaces. Do not use solvent containing products!</p>
Cleaning of Tools	<p>Clean all tools and application equipment with Sika® Remover-208 / Sika® TopClean-T immediately after use. Once cured the material can only be removed mechanically.</p>
Further Documents available	<ul style="list-style-type: none"> ■ Safety Data Sheet (SDS) ■ Pre-treatment Chart Sealing & Bonding

Notes on Application / Limitations

Sikaflex[®] Tank N can be over-painted with most conventional paint systems. The paint must be tested for compatibility by carrying out preliminary trials and the best results are obtained if the sealant is allowed to cure fully first. Please note that non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint film.

Colour deviations may occur due to exposure to chemicals, high temperatures, UV-radiation (especially with colour shade white). However a change in colour will not adversely influence the technical performance or the durability of the product.

Do not use Sikaflex[®] Tank N as a glass sealer, on bituminous substrates, natural rubber, EPDM rubber or on building materials which might bleed oils, plasticisers or solvents which could attack the sealant. Do not use Sikaflex[®] Tank N to seal swimming pools. Do not expose uncured Sikaflex[®] Tank N to alcohol containing products as they may interfere with the curing reaction.

Health and Safety Information

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

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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