Construction

Sikaflex® TS Plus

1-part elastic tank sealant

Product Description / Uses	Sikaflex® TS Plus is a 1-part, moisture curing, elastic sealant designed for sealing steel containers built in sections such as enamelled steel or stainless steel tanks. Sikaflex® TS Plus is resistant to liquid manure and suitable for sealing domestic sewage systems.
Characteristics / Advantages	■ Resistant to domestic sewage, liquid manure and numerous chemicals ■ High tear strength ■ High modulus ■ Movement capability of 15% (ISO 9047)
Approvals / Standards	ISEGA Certificate for food stuff Conforms to DIBT for waste water This product has been tested to meet the requirements of Regulation 31 (4)(b) of the Water Supply (Water Quality) Regulations 2000 and that the Secretary of State is satisfied that this product either alone or in combination with any other substance or product in the water is unlikely to affect adversely the quality of the water supplied. A copy of this test report is available on request. Testing of chemical resistance towards liquid manure Testing of chemical resistance towards silage liquids

Product Data

Colours	White, concrete grey, black
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.

Technical Data

Chemical Base	Polyurethane	
Density	1.25 kg/l approx.[2)]	(CQP[1)] 006-4, ISO 1183-1)
Sag Flow	0 mm (20 mm profile, 50°C)	(CQP 061-4, ISO 7390)
Skin Time	5 hours approx.[2)]	(CQP 019-1)
Curing Rate	2 mm/24 h approx.[2)]	(CQP 049-1)
Movement Capability	±15%	(ISO 9047)
Shore A Hardness	40 after 28 days approx.[2)]	(CQP 023-1, ISO 868)
Tear Propagation Resistance	8.0 N/mm approx.[2)]	(CQP 045-1, ISO 34)
Tensile Secant Modulus	0.75 N/mm^2 approx. at 100% elongation[2), 3)]	(CQP 020-1, ISO 8339)
Elongation at Break	750% approx.[2)]	(CQP 036-1, ISO 37)
Elastic Recovery	> 80%[2), 3)]	(CQP 018-1, ISO 7389)
Application Temperature	+5°C to +40°C	
Service Temperature	Dry: -40°C to +70°C Wet: maximum 40 °C in movement joints -maximum 55°C* as overlap sealing in bolted steel tanks * Continuous maximum service temperatures are subject to the behaviour of chemical mixtures, which can be complex. The designer of the process system should be aware that all applications, including mesophilic and thermophilic digestion, are dependent on pH and content analysis which should be addressed at the specification phase H	
Resistance	Sikaflex® TS Plus is resistant to water seawater, liquid manure, diluted alkalis, neutral water based dispersed detergents / cleaners and domestic sewage. For resistance to diluted acids please consult our Technical Service Department. Sikaflex® TS Plus is not resistant to alcohols, organic acids, concentrated alkalis, and concentrated acids, chlorinated and aromatic hydrocarbons. Note: The designer of the process system should be aware that all applications, including mesophilic and thermophilic digestion, are dependent on pH and content analysis which should be addressed at the specification phase	

[1)] Sika Corporate Quality Procedure

[2)] 23°C / 50% r.h.

[3)] conditioning: Method B

Application Details

Joint Design	In construction all relevant regulations are applicable. the sealant must be specified and included in the design of the containment system. Special care must be taken where movement of the container sections can occur. If there are significant areas of sealant in contact with the contents, the sealant must exhibit long-term stability. The sealant must only be subjected to stress including chemical exposure after full curing so that its adhesion and performance is not impaired. In expansion joints use closed cell, compatible foam backer rods such as high resilience polyethylene foam.
Substrate Preparation / Priming	Surfaces must be clean, dry and free from oil, grease and dust, loose or friable particles. Cement laitance has to be removed. Light abrasion of the surface of non-porous substrates with a very fine abrasive pad may improve the adhesion performance. Non porous substrates Galvanised steel, stainless steel, aluminium, anodised aluminium, powder coated metals or glazed tiles have to be cleaned and pre-treated with Sika®Aktivator-205 by using a clean lint free towel or cloth. Before sealing allow a flash-off time >15 min (max.6 hours). Metals like copper, brass, titanium-zinc etc. have to be cleaned and pre-treated with Sika®Aktivator-205 by using a clean towel. After a flash-off time >15 minutes, apply Sika®Primer-3 N by using a brush and allow a flash-off time >30 minutes (max. 8 hours) before sealing. PVC has to be cleaned and thereafter pre-treated with Sika® Primer-215 by using a brush. Before sealing allow a flash-off time > 30 min (max.8 hours). Porous substrates Concrete, aerated concrete and cementitious plasters, mortars, brick, etc. have to be primed with Sika®Primer-3 N by using a brush. Before sealing allow a flash-off time >30 minutes (max. 8 hours). For detailed instructions consult the Product Data Sheet for pre-treatments or contact our Technical Service Department. Primers are adhesion promoters. They neither substitute for the correct cleaning of the surface nor improve its strength significantly.
Application Method / Tools	Sikaflex® TS Plus is supplied ready to use. After suitable preparation the sealant is gunned into place and tooled if necessary with a spatula or suitable smoothing liquid if required. When tooling Sikaflex®-TS Plus it is necessary to force the sealant firmly into the joint. Do not use solvent containing products as tooling agents.
Cleaning of Tools	Clean all tools and application equipment with Sika® Thinner C immediately after use. Once cured the material can only be removed mechanically.
Further Documents available	■ Safety Data Sheet (SDS) ■ Pre-treatment Chart Sealing & Bonding
Notes on Application / Limitations	Corrosion protection is dependent on the thickness of the sealant layer. Where a lap joint is present, for example in enamelled steel, Sikaflex®-TS Plus provides effective protection with a layer thickness of more than 3 mm (in conjunction with the appropriate adhesion promoter / primer). Where a butt joint is present, for example in concrete structures, Sikaflex®-TS Plus only provides effective protection a depth of more than 8 mm is required. (In conjunction with the appropriate adhesion promoter / primer). The performance of the sealant is dependent on the construction of the container, the area in which the sealing is applied and the correct preparation of the substrate, these points cannot be guaranteed by the sealant manufacturer. To be chemically resistant the sealant must be fully cured. Chemical resistance is dependent on the chemicals, their concentration and their temperature. Exceeding the temperatures could e.g. cause a depolymerisation of the sealant. Sikaflex®-TS Plus is resistant to Chlorine for disinfection purposes only, Please contact tank supplier for guidelines and detailed conditions. Sikaflex® TS Plus 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-

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	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. Before using on natural stone contact our Technical Service. Do not use Sikaflex® TS Plus 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® TS Plus to seal swimming pools. Do not expose uncured Sikaflex® TS Plus to alcohol containing products as they may interfere with the curing reaction.
Value Base	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.
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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