BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® TS Plus

ELASTIC TANK AND SILO SEALANT

DESCRIPTION

Sikaflex® TS Plus is a 1-component, moisture curing, elastic sealant.

USES

Sikaflex® TS Plus may only be used by experienced professionals.
Sikaflex® TS Plus shall be used by professional applicators only.
Sikaflex® TS Plus is 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 is suitable for sealing domestic sewage systems.

CHARACTERISTICS / ADVANTAGES

- Resistant to domestic sewage, liquid manure and numerous chemicals
- High tear propagation resistance
- High modulus
- Movement capability of ±15 % (ISO 9047)

APPROVALS / CERTIFICATES

- ISEGA Certificate for food stuff
- DIBt approval for waste water
- Tested for chemical resistance against liquid manure
- Tested for chemical resistance against silage liquids
- Sikaflex® TS Plus 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 water is unlikely to affect adversely the quality of water supplied. A copy test report is available upon request.

PRODUCT INFORMATION

Composition	Polyurethane	
Packaging	600 ml foil pack, 20 foil packs per box	
Colour	Colour range to be defined by local sales organization.	
Shelf life	Sikaflex® TS Plus has a shelf life of 12 months from the date of production, if it is stored properly in undamaged, original, sealed packaging, and if the storage conditions are met.	
Storage conditions	Sikaflex® TS Plus shall be stored in dry conditions, protected from direct sunlight and at temperatures between +5 °C and +25 °C.	
Density	1.25 kg/l approx.	(ISO 1183-1)

TECHNICAL INFORMATION

Shore A Hardness	40 approx. (after 28 days)	(ISO 868)
Secant Tensile Modulus	0.75 N/mm² approx. at 100% elongation (23 °C)	(ISO 8339)
Elongation at Break	750% approx.	(ISO 37)
Elastic Recovery	80% approx.	(ISO 7389)
Tear Propagation Resistance	8.0 N/mm approx.	(ISO 34)
Movement Capability	± 15%	(ISO 9047)
Chemical Resistance	Sikaflex® TS Plus is resistant to water, seawater, liquid manure, diluted alkalis, neutral water-based dispersed detergents / cleaners and domestic sewage. Sikaflex® TS Plus is not resistant to alcohols, organic acids, concentrated alkalis, concentrated acids, and 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.	
Service Temperature	Dry: ▪ −40 °C to +70 °C Wet: ▪ ≤ 40 °C in movement joints ▪ ≤ 55 °C* as overlap sealing in bolted steel tanks *Continuous max. 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.	
Joint Design	All standard construction guidelines and regulations apply. 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 exposer, after full curing, so that its' adhesion and performance is not impaired. For larger joints please contact our Technical Service Department.	

APPLICATION INFORMATION

Backing Material	Use closed cell, polyethylene foam backing rods.	
Sag Flow	0 mm (20 mm profile, 50 °C)	(ISO 7390)
Ambient Air Temperature	+5 °C to +40 °C, min. 3 °C above dew point temperature	
Substrate Temperature	+5 °C to +40 °C	
Curing Rate	2 mm/24 hours approx. (23 °C / 50% r.h.)	(CQP 049-2)
Skinning time	5 hours approx. (23 °C / 50% r.h.)	(CQP 019-1)

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles.

Non-porous substrates
Enamelled steel, aluminium, anodised aluminium, stainless steel, galvanised steel, powder coated metals or glazed tiles have to be cleaned and pre-treated using Sika® Aktivator-205, wiped on with a clean towel. Before sealing, allow a flash-off time of > 15 minutes (< 6 hours).
Consult the tank manufacturer's instructions for their specific preparation and priming recommendations.
Other metals, such as copper, brass and titanium-zinc, also have to be cleaned and pre-treated using Sika® Aktivator-205,wiped on with a clean towel. After the necessary flash-off time, use a brush to apply Sika® Primer-3 N and allow a further flash-off time of > 30

minutes (< 8 hours) before sealing the joints. PVC has to be cleaned and pre-treated using Sika® Primer-215 applied with a brush. Before sealing, allow a flash-off time of > 30 minutes (< 8 hours).

Porous substrates
Concrete, aerated concrete and cement based renders, mortars and bricks shall be primed using Sika® Primer-3 N applied with a brush. Before sealing, allow a flash-off time of > 30 minutes (< 8 hours).

For more detailed advice and instructions please contact the local Sika Technical Services Department.

Note: Primers are adhesion promoters. They are neither a substitute for the correct cleaning of a surface, nor do they improve the strength of the surface significantly.

APPLICATION METHOD / TOOLS

Sikaflex® TS Plus is supplied ready to use.
After the necessary substrate preparation, insert a suitable backing rod to the required depth and apply any primer if necessary. Insert a foil pack or cartridge into the sealant gun and extrude Sikaflex® TS Plus into the joint making sure that it comes into full contact with the sides of the joint and avoids any air entrapment. Sikaflex® TS Plus must be firmly tooled against the joint sides to ensure adequate adhesion.
Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surfaces. Do not use tooling products containing solvents.
For lap joints (e.g. in enamelled steel containers), consult the tank manufacturer's instructions.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Thinner C. Once cured, residual material can only be removed mechanically.

FURTHER INFORMATION

- Safety Data Sheet
- Pre-treatment Chart Sealing and Bonding

IMPORTANT CONSIDERATIONS

- Corrosion protection is dependent on the thickness of the sealant layer.
- In case of a lap joint, for example on enamelled steel, Sikaflex® TS Plus provides effective protection with a layer thickness ≥ 8 mm (in conjunction with the appropriate adhesion promoter and/or primer).
- In case of a butt joint, for example in concrete structures, Sikaflex® TS Plus provides effective protection when applied with a depth ≥ 8 mm.
- The performance of the sealant is dependent on the construction of the container, the area in which the sealant 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 overpainted with most conventional facade coating paint systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials (e.g. according to ISO technical paper: Paintability and Paint Compatibility of Sealants). The best over-painting results are obtained when the sealant is allowed to fully cure first. Note: non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint film.
- Colour variations may occur due to exposure to chemicals, high temperatures and/or UV-radiation (especially with the colour shade white). However, a change in colour is purely of aesthetic nature and does not adversely influence the technical performance or durability of the product.
- Do not use Sikaflex® TS Plus on natural stone.
- Do not use Sikaflex® TS Plus on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might bleed oils, plasticizers or solvents that could attack the sealant.
- Do not use Sikaflex® TS Plus to seal joints in and around swimming pools.
- Do not expose uncured Sikaflex® TS Plus to alcohol containing products as this may interfere with the curing reaction.

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.

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 war-

ranty 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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