

BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-406 KC

One-part, polyurethane, self-levelling, high-performance sealant that can be accelerated with Sikaflex®-406 KC Booster.

PRODUCT DESCRIPTION

Sikaflex®-406 KC is a one-part, self-levelling, elastic floor joint sealant that can be accelerated with Sikaflex®-406 KC Booster. The Product is used for movement and connection floor joints where high mechanical and chemical resistance are required. Adding Sikaflex®-406 KC Booster allows the product to cure rapidly and homogeneously in situations where a quick release of the joint is required.

USES

Sikaflex®-406 KC installation works to be carried out only by Sika Approved Contractors. Please observe information given by Product Data Sheets.

Sikaflex®-406 KC is used for sealing:

- Connection joints between steel, specified asphalt types, concrete, granite, paving stones, and rails in the road-track superstructure
- Movement joints in roads or other situations where early exposure to traffic is required

CHARACTERISTICS / ADVANTAGES

- High movement capability: ±25 % (EN 15651-4) and ±35 % (EN 14188-2)
- Low stress on joint flanks
- Very good mechanical resistance
- Very good resistance to hydrocarbons like fuels, oils and many other chemicals
- Solvent-free according to TRGS 610

ENVIRONMENTAL INFORMATION

 Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

APPROVALS / STANDARDS

- CE marking and declaration of performance based on EN 14188-2:2004 Joint fillers and sealants — Part 2: Specifications for cold applied sealants
- CE marking and declaration of performance based on EN 15651-4:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 4: Sealants for pedestrian walkways

PRODUCT INFORMATION

Chemical Base	· · · ·	Sika® i-Cure® Technology polyurethane with the possibiliy to acecelerated with Sika® Booster-Technology		
Packaging	Sikaflex®-406 KC	10 L container		
	Sikaflex®-406 KC Booster	150 ml foil packs, 5 per box		
Colour	Available in a range of colours, refer to the price list for further information.			
Shelf Life	12 months from date of production			

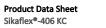
Product Data Sheet

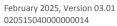
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Storage Conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.					
Density	Sikaflex®-406 KC 1.40 kg/L					(ISO 1183-1)
	Sikaflex®-406					
	Mixed Products 1.40 kg		cg/L			
TECHNICAL INFORMATION						
Shore A Hardness	SIKAFLEX®-406 KC Cured 28 days at +23 °C 28 and 50 % R.H.				(EN ISO 868)	
	Cured 8 hours and 50 % R.H.		16 			(EN ISO 868)
	Temperature	state at 25 % of final	Cured state at 50 % of final hardness	Cured state at 80 % of final hardness	Cured state at 100 % of final hardness	(EN ISO 868)
	5 °C	14 h	24 h	48 h		
	23 °C	5 h	8 h	24 h	28 days	
	35 °C 3 h 6 h 24 h - At 80 % of its final hardness, the sealant is considered suffice withstand mechanical loads.					fficiently cured to
Secant Tensile Modulus	0.45 N/mm² at 100 % elongation and +23 °C (ISO 8339)					
Elongation at Break	700 %					(ISO 37)
Elastic Recovery	90 %					(EN ISO 7389)
Tear Propagation Resistance	8.0 N/mm					(ISO 34-2)
Movement Capability	± 35 %					(EN 14188-2)
···-,						(EN ICO 0047)
	± 25 %					(EN ISO 9047)
Chemical Resistance	± 25 % Sikaflex®-406 • Water and • Dilute alkal • Cement slu • Water disponsikaflex®-406 • Diesel • Oil • Jet fuel Sikaflex®-406 • Hydrocarbon • Alcohols • Organic aci • Concentrat • Concentrat Contact Sika	seawater is rry ersed dete KC has lim KC is not r ons besides ds ed alkalis ed acids	rgent ited resist esistant to s the above	ance to: o: e mentione	ed	

Maximum

Minimum





Service Temperature



+80 °C

-40 °C

Joint Design

For rail connection joints, refer to the Sika® Method Statement: Joint Seal-

ing of Rails in Track Superstructures with Sikaflex®-406KC

For movement joints in floors and pavements, refer to the Sika® Method

Statement: Sealing of Floor and Speciality Joints

For movement joints in roads and pavements, refer to the Sika® Method Statement: Method Statement Joint Sealing of Road and Pavement joints with Sikaflex®-406 KC

For maintenance, refer to: Application manual - Joint Maintenance, Cleaning and Renovation

APPLICATION INFORMATION

Mixing Ratio	Sikaflex®-406 KC : Sikaflex®-406 KC Booster	100 : 1.5 by volume		
Consumption	For rail connection joints, refer to the Sika® Method Statement: Joint Sealing of Rails in Track Superstructureswith Sikaflex®-406KC For movement joints in floors and pavements, refer to the Sika® Method Statement: Sealing of Floor and Speciality Joints For movement joints in roads and pavements, refer to the Sika® Method Statement: Method Statement Joint Sealing of Road and Pavement joints with Sikaflex®-406 KC			
Backing Material	Use closed cell, polyethylene foam backing rod.			
Sag Flow	Self-levelling, can be used on slopes Product Sikaflex®-406 KC Sikaflex®-406 KC + Sikaflex®-406 KC Booster	Layer thickness Up to 35 mm		
	For other layer thicknesses, please contact Sika Technical Service. For applications on sections with a steep longitudinal slope, Sika® Extende T can be added in an amount appropriate to the slope (pre-tests recommended), up to a maximum of 3 % by weight. The top surface of the infill made with Sikaflex®-406 KC should be maintained at least 3 mm below the level of the adjacent surfaces			
Product Temperature	Maximum Minimum	+40 °C +5 °C		
Ambient Air Temperature	Maximum Minimum	+40 °C +5 °C		
Relative Air Humidity	Maximum Minimum	90 %		
Dew Point	The substrate temperature must be at least +3 °C above dew point to reduce the risk of condensation decreasing adhesion.			
Substrate Temperature	Maximum Minimum	+40 °C +5 °C		
Pot Life	Sikaflex®-406 KC + Sikaflex®-406 KC Booster At +23 °C and 50 % R.H. 20 min			



Curing Time		Curing cond	ditions	Curing time	
	Sikaflex®-406 KC	+23 °C and 50 % r.h.		3.0 mm / 24 hours	
	Sikaflex®-406 KC +	+23 °C and	50 % r.h.	Recessed joints can be	
	Sikaflex®-406 KC Boost-	Surface bro	adcasted	trafficable by rubber car	
	er	with quartz sand		tyres after 3 hours	
	Sikaflex®-406 KC + Sikaflex®-406 KC Boost- er	+23 °C and	50 % r.h.	24 hours to reach full mechanical properties	
	Following its application, Sikaflex®-406 KC + Sikaflex®-406 KC Booster can be broadcast with quartz sand after 1 hour at +23 °C.				
Skin Time	For Sikaflex®-406 KC:				
	At +23 °C and 50 % r.h.		100 minut	tes	
Tack Free Time	For Sikaflex®-406 KC Bo	oster:			
	Without sand at +23 °C	and 50 %	3.5 hours		
	R.H.				
	With sand at +23 °C and 50 % R.H.		1 hour		

VALUE BASE

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

IMPORTANT

Poor adhesion due to incorrect priming procedure Incorrectly defined or uncontrolled priming procedures may lead to a variation in Product performance.

1. Test adhesion on project-specific substrates and agree on procedures with all parties before full project application. For more information contact Sika Technical Services.

Poor adhesion due to inadequate surface preparation Note: Primers are adhesion promoters. Primers cannot replace proper surface preparation and surface cleaning.

1. Do not use primers for improving poorly prepared or poorly cleaned joint surfaces.

The substrate must be sound, clean, dry and free of contaminants such as dirt, oil, grease, cement laitance, sealant residues and poorly bonded coatings which could affect adhesion of the primer and sealant. The substrate must be of sufficient strength to withstand the stress induced by the sealant during movement.

- Use techniques such as wire brushing, grinding, grit blasting or other suitable mechanical methods to remove all weak substrate material.
- 2. Repair all damaged joint edges with suitable Sika repair products.
- 3. Remove dust, loose and friable material from all surfaces before applying the sealant.

Use the following priming or pre-treatment procedures to ensure optimum adhesion and joint durability, or if the Product is used for high-performance applications such as joints on multi-storey buildings, highly stressed joints, or joints exposed to extreme weather. ASPHALT (ACCORDING TO EN 13108-1 AND EN 13108-6)

Fresh cut or existing cut asphalt must have a clean bonding surface with more than 50 % exposed aggregate

1. IMPORTANT Avoid excessive application of primer to avoid causing puddles. Prime the surface with Sika® Primer-3 N or Sika® Primer-115 applied with a brush. For more information before using the Product on asphalt, rubber or EPDM, contact local Sika Technical

DAMP OR GREEN CONCRETE
Damp or green concrete must be primed with
Sikadur®-32+.

MIXING

Services.

- 1. Mix the Product for 60–90 seconds using a stirrer with a U-shaped paddle (600 rpm).
- IMPORTANT Avoid excessive mixing to minimise air entrainment. Add the booster to the Product and mix continuously for 2–3 minutes until a uniform mix is achieved.

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.



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IMPORTANT

Staining on natural stone substrates due to plasticiser migration

Staining from plasticiser migration may occur when used on cast, reconstituted or natural stone such as granite, marble or limestone substrates.

1. Do not use on natural stone substrates IMPORTANT

Degradation of sealant due to chemical attack

 Do not use the Product to seal joints in and around swimming pools containing water treatment agents such as chlorine.

IMPORTANT

Insufficient curing due to exposure to alcohol

Exposure to alcohol during curing may interfere with the curing reaction and cause the Product to remain soft or become tacky.

- 1. Do not expose the Product to alcohol-containing products during the curing period.
- 1. After the required substrate preparation, insert a backing rod to the required depth.
- Prime the joint surfaces as recommended in substrate preparation. Note Avoid excessive application of the primer.
- 3. Mix the Product as described in the section "Mixing".
- Apply the Product into the joint. Note Avoid air entrapment. Make sure that the Product comes into full contact with the adhesion area of the joint.

OVERPAINTING THE SEALANT IMPORTANT

Tacky paint due to plasticiser migration

Paints and sealants or adhesives may contain plasticizers and other substances that migrate and can cause the painted surface to become tacky.

IMPORTANT

Cracking paint due to joint movement

Rigid paint applied on top of a sealant or flexible adhesive may crack when used on joints subject to movement.

The Product can be overpainted with most conventional paint coating systems.

- 1. Allow the Product to fully cure before overpainting.
- 2. Before overpainting, carry out preliminary trials to test compatibility of the paint or coating system with the Product in accordance with ISO/TR 20436:2017 Buildings and civil engineering works Sealants Paintability and paint compatibility of sealants.

Colour variation

Note: Colour variation may occur especially with white or other light colour shades. This effect is purely aesthetic and does not adversely influence the technical performance or durability of the Product.

CLEANING OF TOOLS

Clean all tools and application equipment immediately after use with Sika® Remover-208 or Sika® Cleaning Wipes-100. Once cured, hardened material can only be removed mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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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