BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-406 KC

POLYURETHANE SELF-LEVELLING ELASTIC RAIL JOINT SEALANT WITH ACCELERATED BOOSTER CURING

DESCRIPTION

Sikaflex®-406 KC is a 1-component, self-levelling, elastic rail joint sealant for use in road and track construction. Rapid, accelerated and homogeneous curing throughout the entire sealant is achieved by the addition of the Sikaflex®-406 KC Booster.

USES

Sikaflex®-406 KC may only be used by experienced professionals.

Connection joints between steel, defined asphalt types, concrete, granite and rails in track and road construction where early exposure to traffic is required.

CHARACTERISTICS / ADVANTAGES

- Fast curing: Recessed and broadcasted joints can be opened to traffic after 3 hours (depending on temperature)
- Very high mechanical and chemical resistance
- Movement capability ±25 %
- Low stress on joint edges
- Self-levelling
- Easy application

APPROVALS / CERTIFICATES

- CE-Marking to DIN EN 14188-2
- CE-Marking to DIN EN 15651-4

PRODUCT INFORMATION

Composition	i-Cure® Technology polyurethane accelerated with Sika® Booster-Technology		
Packaging	Sikaflex®-406 KC	Container: 10 l	
	Sikaflex®-406 KC Booster	150 ml foil pack	
Colour	Black, concrete grey		
Shelf life	Sikaflex®-406 KC	15 months from date of production	
	Sikaflex®-406 KC Booster	24 months from date of production	
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +25 °C. Always refer to packaging.		
Density	Sikaflex®-406 KC	~1.4 kg/l	(ISO 1183-1)
	Sikaflex®-406 KC Booster	~1.2 kg/l	

TECHNICAL INFORMATION

Shore A hardness	~15	after 24 h	(ISO 868)
	~28	after 28 d	
Secant tensile modulus	~0.45 N/mm² *	+23 °C	(ISO 8339)
	~0.80 N/mm² *	-20 °C	
	* at 100 % elongation		
Elastic recovery	~90 %		(ISO 7389)
Tensile strain at break	~700 %		(ISO 37)
Tear propagation resistance	~8 N/mm²		(ISO 34)
Movement capability	±25 %		(ISO 9047)
	±35 %		(EN 14188-2)
Chemical resistance	Resistant to water, seawater, diluted alkalis, cement slurry and water dispersed detergent and temporary resistant to diesel, oil and jet fuel (EN 14187-6) Sikaflex®-406 KC is not resistant to alcohols, organic acids, concentrated alkalis and concentrated acids as well as hydrocarbons besides the above mentioned. Contact Sika Technical Services for additional information.		
Service temperature	-40 °C to +80 °C		

APPLICATION INFORMATION

Mixing ratio	Sikaflex®-406 KC : Sikaflex®-406 KC Booster = 100 : 1.5 Vol.-%	
Consumption	~1.4 kg/l (mixed material) Refer to Method Statement for further details.	
Backing material	Filler block	
Ambient air temperature	+5 °C to +40 °C	
Substrate temperature	+5 °C to +40 °C, min. 3 °C above dew point	
Pot Life	~20 min. (+23 °C / 50 % r.h.) with Sikaflex®-406 KC Booster	
Curing time	~24 hours with Sikaflex®-406 KC Booster. When the surface is broadcast with quartz sand, recessed joints can be trafficable by rubber car tyres after approx. 3 hours (+23 °C/50 % r.h).	
Tack free time	Without sand	~3.5 hours (+23 °C)
	With sand	~1 hour (+23 °C)

BASIS OF PRODUCT DATA

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

IMPORTANT CONSIDERATIONS

- Sikaflex®-406 KC cannot be used on slopes > 3 %.
- Colour variations may occur due to the exposure in service to chemicals, high temperatures and/or UV-radiation (especially with white colour shade). This effect is aesthetic and does not adversely influence the technical performance or durability of the product.
- Sikaflex®-406 KC can be over-painted. However, paints must first be tested to ensure compatibility by carrying out preliminary trials. Optimum 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 coating. Depending on type of paint used, plasticizer migration may occur causing the paint to become surface 'tacky'.
- Do not use Sikaflex®-406 KC on natural stone without pre-testing according to ISO 16938.
- Do not use on bituminous substrates, natural rubber or any building materials which might leach oils, plasticisers or solvents that could degrade the sealant. These types of materials if in direct contact with Sikaflex®-406 KC have to be tested for compatibility prior to application. For specific advice contact Sika technical services.
- Do not expose uncured Sikaflex®-406 KC to alcohol containing products as this may interfere with the curing reaction.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate and the joint edges must be sufficiently load-bearing, clean, dry, sound and free from oils, grease, dust, laitance and loose or friable particles. All dust, loose and friable material must be completely removed from all surfaces before application of any activators, primers or sealant.

For optimum adhesion, pre-treat with Sika® Primer-115 or Sika® Primer-3 N in advance.

Refer to Method Statement for further details.

MIXING

For mixing an electric stirrer with a U-shaped stirring paddle (demand min. 1000 W, speed ~600 r/min) must be used. Before adding the Sikaflex®-406 KC Booster the material should be premixed thoroughly. Add the Booster to Sikaflex®-406 KC and mix continuously for 2 to 3 minutes until a uniformly coloured mix has been achieved. Over mixing must be avoided to minimise air entrainment.

APPLICATION METHOD / TOOLS

Manual Application

Form an outlet through a bend at the top edge of the mixed container and pour it into the joints within the pot life. Ensure that contact with the joint edges is ensured and air pockets are avoided.
Sikaflex®-406 KC levels itself, it does not need to be stripped or smoothed. After sealing the rail joint sealant can be broadcast.

Volume application

Sikaflex®-406 KC and Sikaflex®-406 KC Booster can be applied with a suitable booster pump. Contact Sika Technical Services for additional information.

Refer to Method Statement for further details.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with Sika® Remover-208 or Sika® Colma Cleaner immediately after use. 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.

Sika Deutschland GmbH
Kleben und Dichten Bau
Stuttgarter Straße 117
DE-72574 Bad Urach
Tel. +49 711 8009 - 1397
Fax +49 711 8009 - 10071
www.sika.de, E-Mail: info@de.sika.com