SEALING & BONDING
Sikaflex®-406 KC
Sikaflex®-406 KC Booster

RAPID CURING JOINT SEALING SYSTEM

BUILDING TRUST

RAPID CURING SEALANT

The rapid completion and re-opening of areas to traffic is usually a key requirement on infrastructure projects, especially during refurbishment works. Their closure to traffic for any extended periods is always an issue, which has become even more difficult with increasing traffic, be this at a road junction or a roundabout, on an airport apron or for a suburban tram line. Full traffic access with normal service demands needs to be returned as soon as possible, ideally within just a few hours so that vehicles can pass again without delay.

Increasing the speed of construction works has been a driver of innovation for many years. Sika developments in this direction have included admixtures for reducing concrete hardening times and increasing early-age strengths, materials for application over a wider range of temperatures, systems for application on wet substrates, plus faster curing joint sealing systems, structural adhesives and protective coatings, all help to minimise any delay.

The rapid curing of joint sealing products can be achieved by adding a so-called booster, also known as an accelerator. Sikaflex®-406 KC is a, single component, joint sealant, which is accelerated with a booster, Sikaflex®-406 KC Booster. Sikaflex®-406 KC system combines the advantages of both one- and two-component joint sealing systems.

The Sikaflex®-406 KC system is based on the proven, durable and best-in-class, Sikaflex® PRO-3 sealant technology platform, which has been further optimized with the latest Sika i-Cure® and Sika booster technology. Sikaflex®-406 KC and Sikaflex®-406 KC Booster is the safe and reliable joint sealing solution choice for your projects.

The advantages of Sikaflex® booster technology systems are:

- Curing speed is not related to the joint dimensions – the sealant cures homogeneously internally, not just from outside to inside with moisture.
- Suitable for application in dry conditions (e.g. including even at lower temperatures) – the sealant cures independently of the atmospheric humidity.
- Not susceptible to moisture – so the system provides bubble-free curing.
- Not sensitive to mixing errors – the sealant will always cure.
- Adjustable application times – the amount of booster can be varied within certain limits.
- EHS friendly and safe to use – the booster is a water based paste.

Sikaflex®-406 KC
Sikaflex®-406 KC Booster

Sikaflex®-406 KC is a one-part, self-levelling, elastic joint sealant, with high mechanical and chemical resistance. Rapid and homogeneous curing throughout the entire sealant is achieved by the addition of Sikaflex®-406 KC Booster.

Sikaflex®-406 KC with Sikaflex®-406 KC Booster is designed for:

- Connection joints between steel, asphalt (defined types), concrete, granite, rails in track superstructures.
- Movement joints in roads and airport pavements, parking decks, driveways and other trafficked and/or pedestrian areas with joint dimensions from 10 – 70 mm wide.

Specific advantages of the Sikaflex®-406 KC system are:

- Rapid release of areas to traffic, recessed and broadcast joints can be opened to traffic after only 3 hours (dependent on temperature).
- High joint movement capability of ±25%
- Very high mechanical and chemical resistance

Sikaflex®-406 KC system certification includes:

- CE: EN15651-4 PW EXT-INT CC 25 HM
- EN 14188-2
- Key parts of the US Federal Specification SS-S-200E
- Chemical resistance tests
- EC1PLUS, A+, L EED v4

MATERIAL CHARACTERISTICS:
Sikaflex®-406 KC AND Sikaflex®-406 KC Booster

Shore A	ISO 868	~ 28 +/- 3 (after 24 h) ~ 16 +/- 3 (after 8 h)
Secant Tensile Modulus	ISO 8339	~ 0.5 N/mm² (+23°C) ~ 0.9 N/mm² (-20°C)
Elongation	ISO 37	~ 700%
Elastic recovery	ISO 7389	~ 90%
Tear propagation resistance	ISO 34	~ 8 N/mm²
Service temperature		-40°C to 80°C

CHEMICAL RESISTANCE

Chemical resistance according to EN 14187-6 quantifies the impact that any given chemicals have to the mechanical properties and adhesion behavior of the Sikaflex®-406 KC system. This closely reflects real life situations. For more detailed information on this please refer to the separate Sika Method Statement for Road and Pavement Joints.

MATERIAL CHARACTERISTICS:
Sikaflex®-406 KC AND Sikaflex®-406 KC Booster

Medium	Exposure time	Chemical resistance
Petrol & gasoline	8 h	++
	72 h	+
Diesel & engine oil	72 h	+++
Jet fuel	72 h	+++
Deicing agent	21 days	+++
Salt water (10%)	21 days	+++
Skydrol	6 h	+++
	8 h	++
Isopropanol	72 h	+++

– Adhesive or cohesive failure
\+ Neither adhesive nor cohesive failure
++ Neither adhesive nor cohesive failure & change of module ≤ 50%
+++ Neither adhesive nor cohesive failure & change of module ≤ 20%

APPLICATION PROPERTIES:
Sikaflex®-406 KC WITH Sikaflex®-406 KC Booster:

Mix Ratio: Sikaflex®-406 KC: Sikaflex®-406 KC Booster, is to be 100: 1.5% by volume
Pot Life: 20 – 30 min (@23°C)
Curing Times:

Temperature	Cure state in % of final hardness		
	25%	50%	80%
5°C	14 h	24 h	48 h
23°C	5 h	8 h	24 h
35°C	3 h	6 h	24 h

Tack-free time: Without sand broadcast: ~3.5 hours, with sand broadcast: ~ 1 hour (@23°C).
Trafficable by pneumatic car tires: After approx. 3 hours (+23°C), based on recessed joints, surface broadcast with sand and for joint widths up to 70 mm.
Joint preparation: Concrete and steel: Brush and remove loose and friable particles, clean all surfaces thoroughly and then apply Sika® Primer-3N or Sika® Primer-115.
Damp concrete: Clean surfaces thoroughly and use Sika® Primer-115.
Green or wet concrete: Remove laitance and clean thoroughly and use Sikadur®-32 as the primer.
Asphalt: Must be freshly cut with the bonding surfaces having minimum 50% of exposed aggregates. Use Sika® Primer-115. Please refer to the Method Statement for more details.
Rubber and EPDM materials: Please contact your local Sika Technical Services for advice.
Joint design: Please refer to the separate Method Statements for Road and Pavement Joints and/or Rail Superstructures.
For the complete product data please refer to the Product Data Sheet of Sikaflex®-406 KC and Sikaflex®-406 KC Booster

SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:


LIQUID APPLIED ROOFING


SINGLE PLY ROOFING


CONCRETE


CONCRETE REPAIR


STRUCTURAL STRENGTH-ENINGON


WATERPROOFING


JOINT SEALING


FAÇADE STRUCTURAL ADHESIVES


FLOORING


INDUSTRY


DISTRIBUTION

BUILDING TRUST

WHO WE ARE

Sika Limited and Sika Ireland Limited are part of the global Sika Group, specialising in the manufacture and supply of chemical based products. Sika have a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protecting in the building sector and the motor vehicle industry. Sika has subsidiaries in 101 countries around the world and manufactures in over 200 factories. With more than 20,000 employees Sika generates annual sales of CHF 7.09 billion (£5.45bn). We are also committed to providing quality, service, safety and environmental care.

In the UK and Ireland, we provide market-leading solutions for concrete, waterproofing, roofing, flooring, refurbishment, sealing & bonding, and industry, and have manufacturing sites in Welwyn Garden City, Preston, Leeds and Dublin with more than 870 employees and a turnover of more than £260 million.

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