



SEALING & BONDING

Sikaflex<sup>®</sup>-406 KC

Sikaflex<sup>®</sup>-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  $\pm 25\%$
- 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
- EC1<sup>PLUS</sup>, 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/mm <sup>2</sup> (+23°C)
Elongation	ISO 37	~ 700%
Elastic recovery	ISO 7389	~ 90%
Tear propagation resistance	ISO 34	~ 8 N/mm <sup>2</sup>
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  $\leq 50\%$
- +++ Neither adhesive nor cohesive failure & change of module  $\leq 20\%$

#### 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 – FOR RELIABLE SOLUTIONS



## WE ARE SIKA

Sika is a specialty chemicals company with 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's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

## 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.

## 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.

## 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 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.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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