

SikaDur[®] Combiflex[®]

High Performance Joint and Crack Sealing System

Construction



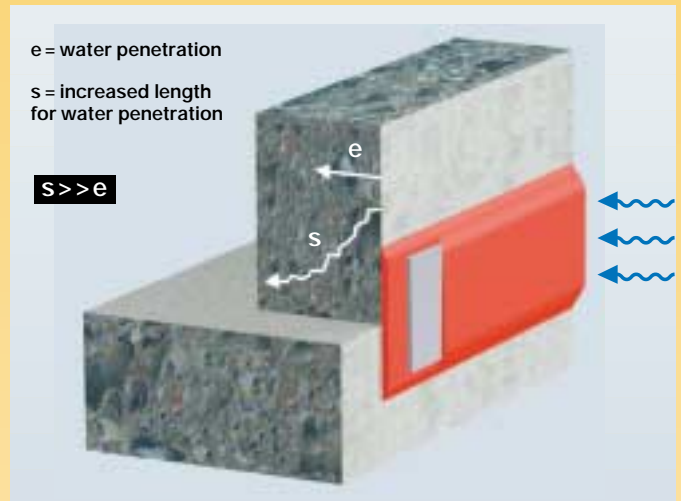
- ▲ Suitable for both new and repair works
- ▲ High joint movement capacity
- ▲ Accommodates movement in more than one dimension
- ▲ Accommodates variations in joint width
- ▲ Internally or externally applied



SikaDur® Combiflex® System: Components

Function

Movement joints and cold joints are sealed by increasing the path of water penetration. The SikaDur® Adhesive is fully bonded to the substrate as well as to the SikaDur® Combiflex® Strip.



System Components

SikaDur® Epoxy Adhesives

To achieve a watertight, durable connection between the SikaDur® Combiflex® Strip and the substrate, 2-component, epoxy-based SikaDur® Adhesives are used:

SikaDur® 31 Adhesive

- ▲ Extremely easy to apply
- ▲ Very smooth surface finish
- ▲ Excellent 'grab'

SikaDur® 31 Rapid

- ▲ High thixotropy for ease and uniformity of application (including vertical and overhead)
- ▲ Fast curing for below ground work
- ▲ DWI Regulation 25 (1)(a) approved for contact with public water supplies



Drill mixing with paddle.

SikaDur® Combiflex® Strips

- ▲ Weldable, no need for prefabricated fittings
- ▲ Direct bonding to adhesive, no need for adhesion promoter
- ▲ Additional security through special resin connecting perforations
- ▲ Outstanding flexibility
- ▲ High durability and resistance



Hot air welding of joint details.

and Applications

SikaDur Combiflex® System Solutions

Movement Joints

- ▲ Thermal movement
- ▲ Settlement
- ▲ Dissimilar material connections
- ▲ New to existing structures
- ▲ Differential movement
- ▲ Variable joint width
- ▲ Wide joints/narrow joints
- ▲ Existing failed joints with unremovable sealant (bitumen etc)
- ▲ Failed water bars



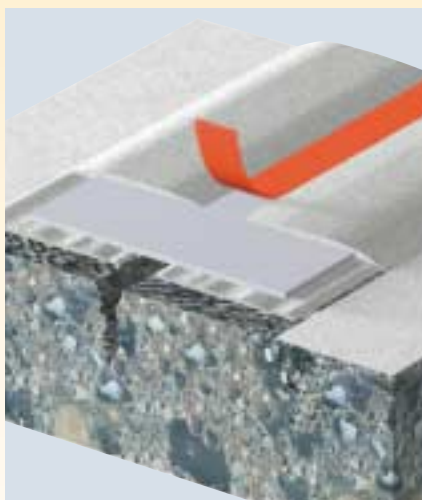
Construction Joints

- ▲ Floor to wall joints
- ▲ A wall to wall joints
- ▲ A wall to ceiling joints
- ▲ Differential material joints
- ▲ Concrete day joints
- ▲ Internal or external applied



Crack Sealing

- ▲ Construction settlement cracks
- ▲ Shrinkage cracks
- ▲ Thermal cracks
- ▲ Sealing repaired structural cracks



SikaDur® Combiflex® : Typical Uses



Potable Water Tanks

- ▲ DWI approved for contact with-potable water
- ▲ Long term water resistance
- ▲ High joint-movement capability
- ▲ New and refurbishment
- ▲ Proven track record for combined strip and adhesive



DWI Approved to Regulation 25(1)(a)



Waste Water Treatment Plants

- ▲ Resistant to raw sewage and chemical attack
- ▲ Long term immersion tested
- ▲ High joint movement capability
- ▲ Good abrasion resistance
- ▲ New and refurbishment



SikaDur® Combiflex® after 12 months immersion in raw sewage and potable water



Water Treatment

- ▲ Resistant to ozone, chlorine and UV light
- ▲ Easily cleaned
- ▲ New and refurbishment



Conventional sealant after 3 month ozone exposure

SikaDur® Combiflex® after 3 month ozone exposure



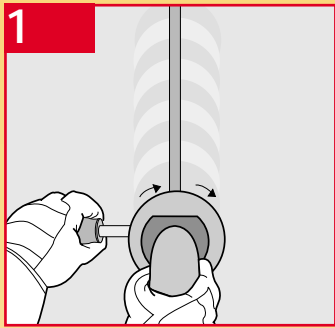
Basement Waterproofing

- ▲ Durable
- ▲ Independent of concreting-work
- ▲ Can be applied internally and externally
- ▲ New and refurbishment (with the Sika® 1 System)

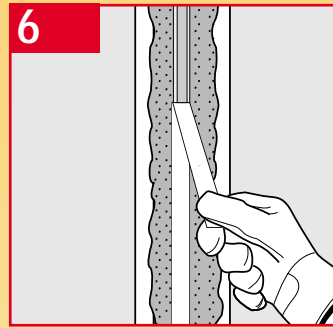


SikaDur® Combiflex® tested under high water-pressure. In conjunction with the Sika® 1 System

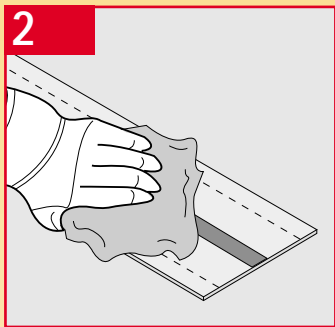
SikaDur® Combiflex® :Application Steps



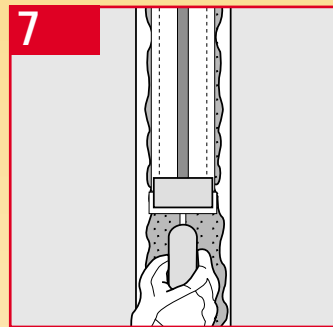
1 Prepare the substrate by mechanical means e.g blast cleaning needle gunning., followed by vacuuming



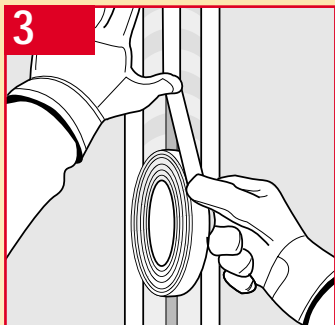
6 Remove masking tape for the centre of the joint



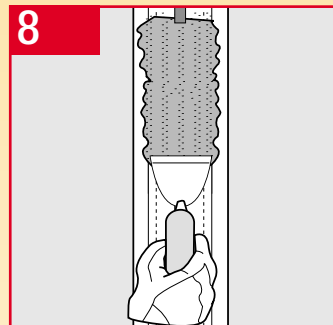
2 Activate the SikaDur® Combiflex® strip on the upper and lower side with a clean cloth and SikaDur® cleaner



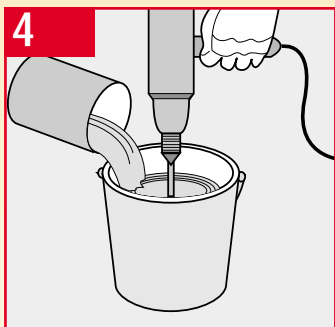
7 Place activated SikaDur® Combiflex® strip in position and roll to exclude air through the special perforations until adhesive comes through



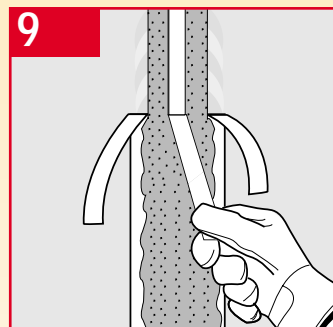
3 Use masking tape to cover the joint



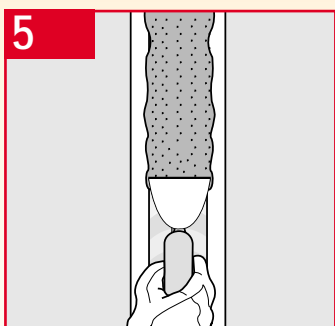
8 Apply SikaDur® adhesive onto the strip



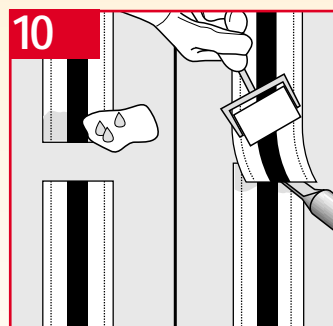
4 Mix SikaDur® adhesive components A and B for a minimum of 3 minutes until the mix is homogeneous and of uniform colour



9 Remove masking tapes from the joint sides as well as the red middle strip from the SikaDur® Combiflex® strip



5 Apply SikaDur® adhesive on both sides of the joint



10 Overlap SikaDur® Combiflex® strip connections by a minimum 30-50mm. Clean with SikaDur® Cleaner and bond with SikaDur® adhesive or with a specialist hot air welding gun and plate.

Note. We recommend that for special details, joints are prewelded offsite

SikaDur® Combiflex® :Case Studies



United Kingdom

Basement for an Investment Bank

Foundations and archives below ground water level
Problems

- Leaking joints due to construction damage to waterbars
- Moisture damage to papers in store

SikaDur® Combiflex® Solution Advantages

- ▲ Application from inside of the existing building basement
- ▲ Higher security and durability compared to injection
- ▲ Overbridging wide and varied dimension joints
- ▲ Easily adaptable in edges and corners



United Kingdom

Spherical Pre-cast Sewage Tank – (Sphereactor) for Anglian Water in England

Problems

- Sealing internally of precast concrete segments for new design of sewage treatment plant
- Resistance to raw sewage

SikaDur® Combiflex® Solution Advantages

- ▲ Internal sealing between segments joints
- ▲ Proven in many other situations for Anglian Water
- ▲ Long term durability, with retained movement capability
- ▲ Strong bond to concrete substrate
- ▲ DWI Regulations 25(1)(a) approved for contact with public water supplies





United Kingdom

Sewer Main Rehabilitation Sealing of Sewer Bridge in UK

Problems

- ➔ Pollution of watercourse due to failure of joints in a sewer bridge crossing a river
- ➔ Reconstruction of bridges did not seal joints between segments sufficiently to pass a water test

SikaDur® Combiflex® Solution Advantages

- ▲ Totally watertight joints
- ▲ Long term resistance to raw sewage
- ▲ Easy application at low temperatures and high humidity



United Kingdom

Reservoir for Southern Water in England

Problems

- ➔ Debonded existing polysulphide sealant
- ➔ Extensive cracking
- ➔ Loss of potable water

SikaDur® Combiflex® Solution Advantages

- ▲ Absolutely watertight leak sealing of joints
- ▲ 20 year proven track record in UK water
- ▲ DWI approved system
- ▲ Easily applied to floors, walls and roof of the reservoir



For more information on Sika visit www.barbourproductsearch.info

SikaDur® Combiflex®

High Performance Joint and Crack Sealing System

Also Available from Sika



Construction

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.



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