Sikadur-Combiflex® SG System
High Performance Joint and Crack Waterproofing System
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Sikadur-Combiflex® SG System

The Sikadur-Combiflex® SG system is the second generation development of the globally proven Sikadur-Combiflex® with even improved performance such as advanced adhesion properties and drinking water approval. The unique system consists of the Sikadur-Combiflex® SG tape and the Sikadur® adhesives. It is widely used as joint waterproofing in watertight concrete structures.

Main Advantages
- Waterproofing of joints with extreme movements
- Easy to install and adjust to complicated construction details
- Excellent adhesion to different substrates
- Resistant to high water pressure
- Crack sealing system
- Easy to control and repair

Function:
- Blocking the path of water penetration
- Increased length of water penetration
- Fully bonded to the concrete preventing underflow

$s > e$

*e* = water penetration (EN 206)
*s* = increased length for water penetration
Typical Applications

Basements
- High water tightness and durability
- Easy to control/repair
- Independent of concreting steps
- High joint movement capacity

Infrastructures
- Bridges
  - De-icing salt resistance
  - UV resistant
- Tunnel Ventilation Ducts
  - Airtight
  - Flexible to joint tolerances

Drinking Water
- Approved in contact with drinking water
- Long-term water resistance
- Easy to control/repair

Swimming Pools
- Resistance to ozone, chlorine and UV
- Good cleaning ability
- Non abrasive to skin

Refurbishment
- Crack sealing
- Resistance to negative water pressure

Sewage Treatment Plants
- Resistance to sewage water
- Good abrasion resistance
- Independent of concreting steps
- High joint movement capacity

Ground Water Protection
- Chemical resistant
- High safety of environment
- Impermeable

Facade Joints
- High joint movements
- Overpaintable (adhesive)
- Weather resistant
Where to use?

- Expansion Joints
  - Temperature dilatation
  - Construction settlements
  - Material connection
  - Building connection

- Construction Joints
  - Connection between concrete steps
  - Floor-to-wall Connection
  - Different material connection
  - Inside-outside application

- Cracks Repair
  - Construction settlements
  - Shrinkage
  - Thermal influences
  - Structural overload

Where to use?

- Red masking tape
- Sikadur® adhesive
- Sikadur-Combiflex® SG tape
- Prepared concrete surface
- Joint filler
**Sikadur® Adhesives**

To achieve a watertight, durable connection between **Sikadur-Combiflex® SG** tape and the substrate **Sikadur®** adhesives are used.

**Main Advantages**
- Excellent adhesion to many substrates
- Available with normal and rapid hardening grades of adhesive

**Sikadur-Combiflex® CF Adhesive**
- Optimum workability and finish
- Provides smooth surface

**Sikadur®-31 CF**
- Higher layer thickness is required

**Sikadur®-31 DW**
- Drinking water approval

**Sikadur®-33**
- Mechanical mixing and dosage with **Sika CoMix-101**
- Very suitable for high volumes

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**Sikadur-Combiflex® SG Tape**

**Sikadur-Combiflex® SG** is a flexible prefabricated waterproofing tapes based on modified flexible Polyolefin (FPO) with advanced adhesion.

**Main Advantages**
- Advanced adhesion, no activation on site required
- Can be used in contact with potable/drinking water
- High water pressure resistance
- High durability and chemical resistance
- UV- and weather resistant
- Root resistance
- Plasticizer free

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**Sikadur-Combiflex® SG type P**

<table>
<thead>
<tr>
<th>Sikadur-Combiflex® SG-10 P</th>
<th>Sikadur-Combiflex® SG-20 P</th>
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<tbody>
<tr>
<td>Tape thickness [mm]</td>
<td>1.0</td>
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<tr>
<td>Tape width [mm]</td>
<td>100, 150, 200, 250, 300</td>
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<td>400, 500, 1000, 2000</td>
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<td>Tape length [m]</td>
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</table>

**Sikadur-Combiflex® SG type M**

(with red masking tape for easier application in expansion joints)

<table>
<thead>
<tr>
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Sikadur®-Combiflex® SG System - Application

1. Substrate preparation by means of sandblasting, grinding etc., followed by vacuuming.

2. In case of dirt clean the surface of the Sikadur-Combiflex® SG tape with a dry or wet cloth. Use water and no solvent for cleaning.

3. Use masking strips to cover the joint.

4. Mix Sikadur®-Combiflex® CF adhesive components A and B for a minimum of 3 minutes until the mix is homogeneous.

5. Apply the Sikadur®-Combiflex® CF adhesive on the left-hand and the right-hand side of the joint. Then remove masking strip.

6. Press the Sikadur-Combiflex® SG tape without trapping air into the adhesive by using a suitable roller. The adhesive should be squeezed out on both sides by ~ 5 mm.

7. Apply the Sikadur®-Combiflex® CF Adhesive on the tape.

8. Remove the red middle strip and the masking strips on both sides to ensure a neat and precise detail.

9. Connect tape ends by hot air welding. Prepare the welding area by roughing the surface by scotch brite or sand paper. Overlap 40 - 50 mm.
Sikadur-Combiflex® SG System - Case Studies

Sihlcity-Shopping, Business, Fun and Fitness Centre
Zurich, Switzerland

Project Description:
Building complex containing shopping, cinema, office accommodation etc.
Waterproofing of expansion and construction joints in the basement construction

Project Requirements:
Watertight concrete construction
Waterproofing of joints in areas of groundwater pressure

Sika Solution:
Sealing of the expansion and construction joints with the Sikadur-Combiflex® system against groundwater pressure

Tunnel du Mont Blanc, France

Project Description:
Extensions of the franco-italien Tunnel such as technical gallery etc

Project Requirements:
Watertight joint sealing system
Flexibility to joint tolerances

Sika Solution:
Sealing of the joints with the Sikadur-Combiflex® system, protection of technical installations from water

Water Tank,
Riyadh, Saudi Arabia

Project Description:
Waterproof construction for collection of extra water for emergency purpose

Project Requirements:
Long-term water resistant
High joint movement capacity

Sika Solution:
Sealing of the 25 km joints with the Sikadur-Combiflex® system
Sika Full Range Solutions for Construction

Concrete Production
- Sika® ViscoCrete®
- Sika® Retarder®
- Sika® SikaAer®

Waterproofing
- Sikaplan®, Sikalastic®, Sika® & Tricosal® Water-stops
- Sika® Injection Systems

Flooring
- Sikafloor®
- SikaBond®

Corrosion and Fire Protection
- SikaCor®
- Sika® Unitherm®

Concrete Repair and Protection
- Sika® MonoTop®
- Sikagard®
- Sikadur®

Structural Strengthening
- Sika® CarboDur®
- SikaWrap®
- Sikadur®

Joint Sealing
- Sikaflex®
- Sikasil®

Grouting
- Sikadur®
- SikaGrout®
- Sika AnchorFix®

Roofing
- Sarnafil®
- Sikaplan®, SikaRoof®
- SikaRoof® MTC®

Also available from Sika

Sika Services AG
Business Unit Contractors
Speckstrasse 22
CH-8330 Pfäffikon
Switzerland
Phone +41 58 436 23 80
Fax +41 58 436 23 77
www.sika.com

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