



# **Sikadur-Combiflex<sup>®</sup> SG System** High Performance Joint and Crack Waterproofing System



Innovation & Consistency | since 1910

# Sikadur-Combiflex® SG System

## High Performance Joint and Crack Waterproofing System



### 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.

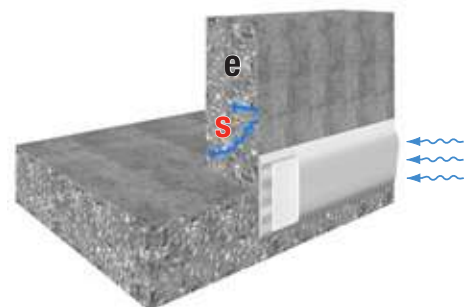


#### Main Advantages

- 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



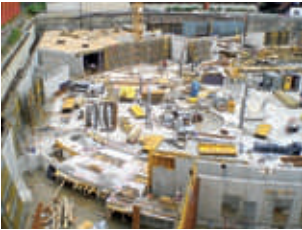
$$s >> e$$

**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



### Refurbishment

- Crack sealing
- Resistance to negative water pressure



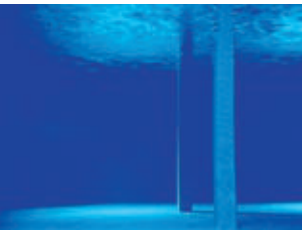
### Infrastructure

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



### Sewage Treatment Plants

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



### Drinking Water

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



### Ground Water Protection

- Chemical resistant
- High safety of environment
- Impermeable



### Swimming Pools

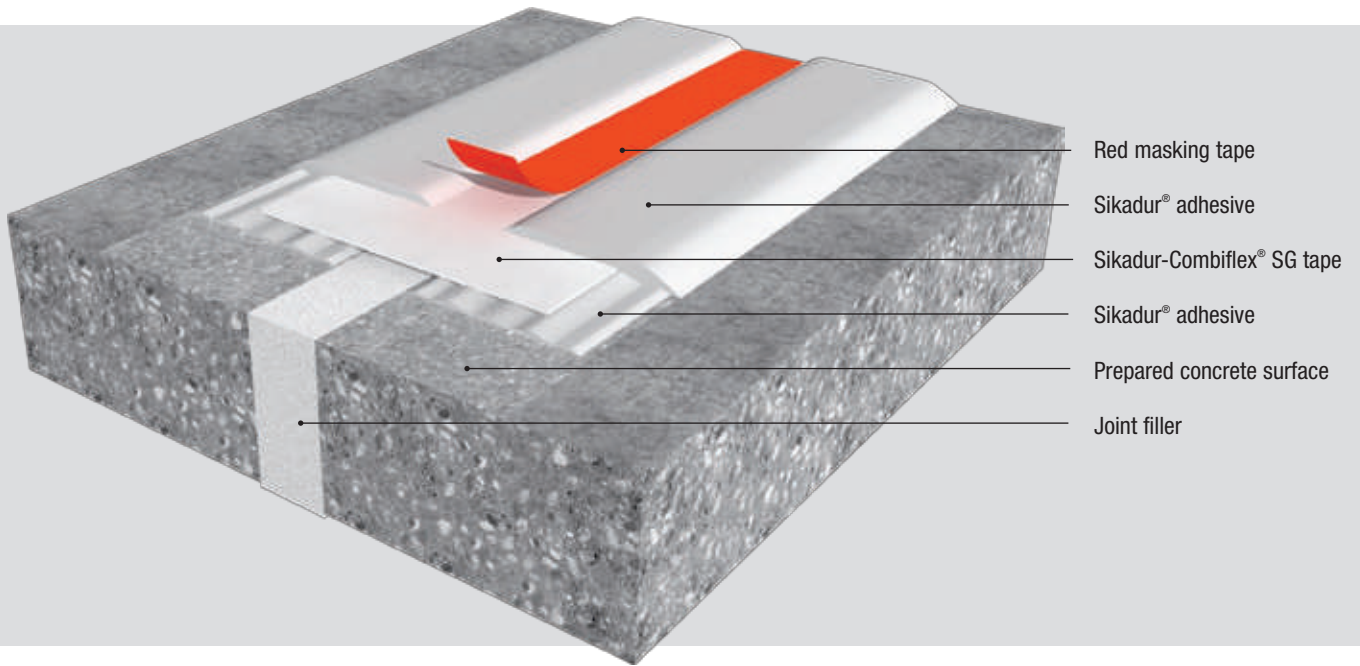
- Resistance to ozone, chlorine and UV
- Good cleaning ability
- Non abrasive to skin



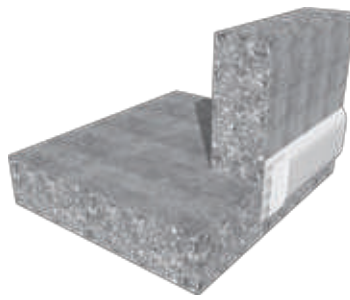
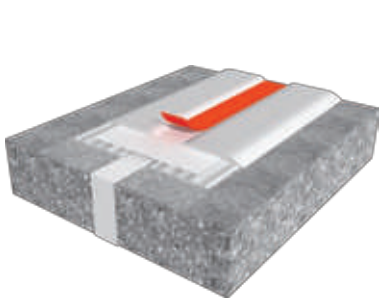
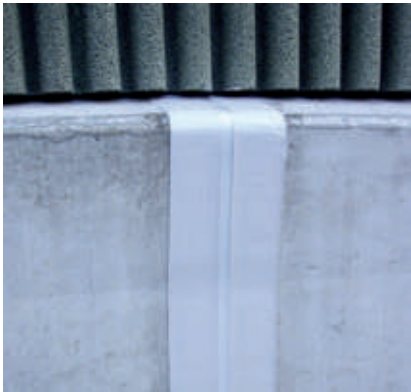
### Facade Joints

- High joint movements
- Overpaintable (adhesive)
- Weather resistant

# Sikadur-Combiflex® SG System



## 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



## 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

## 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

### Sikadur-Combiflex® SG type P

	Sikadur-Combiflex® SG-10 P	Sikadur-Combiflex® SG-20 P
Tape thickness [mm]	1.0	2.0
Tape width [mm]	100, 150, 200, 250, 300 400, 500, 1000, 2000	150, 200, 250, 300 400, 500, 1000, 2000
Tape length [m]	25	25

### Sikadur-Combiflex® SG type M

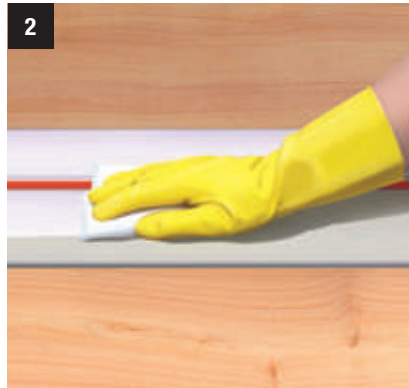
(with red masking tape for easier application in expansion joints)

	Sikadur-Combiflex® SG-10 M	Sikadur-Combiflex® SG-20 M
Tape thickness [mm]	1.0	2.0
Tape width [mm]	100, 150, 200, 250, 300	150, 200, 250, 300
Tape length [m]	25	25

# 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 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 ground-water 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

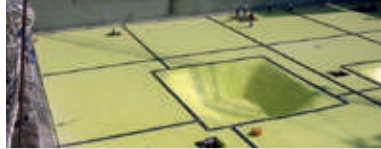
# Sika Full Range Solutions for Construction

## 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® MTC®**

## Also available from Sika

**Watertight Concrete Basements with Sika® Concrete, Jointing, and Injection Technology**

**Flexible Waterproofing of Basement Structures with Sikaplan®**

**Flexible Waterproofing of Tunnels with Sikaplan® Membranes**

**Sika® and Tricosal® Water Stops Waterproofing of Expansion and Construction Joints**

**Sika® Injection Systems for Concrete Structures**

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