



# SikaSwell<sup>®</sup> – Swellable Profiles and Sealants

## Active Waterproofing of Construction Joints



Innovation & since  
Consistency | 1910

# SikaSwell® – Active Waterproofing Systems

## For Construction Joints, Pipe Penetrations and Other Waterproofing Details

# SikaSwell® Typical Applications



### Introduction

**SikaSwell®** swellable profiles and sealants are an internationally tested and proven range of extremely cost effective hydrophilic joint sealing systems. **SikaSwell®** swelling profiles are easily bonded to joints and penetrations in concrete with **Sika®** adhesives, normally with no additional work required to the reinforcement or formwork. The **SikaSwell®** product range includes solutions for sealing construction joints, pipe penetrations, precast sections and isolation joints i.e. between concrete and steel components. They can be used for the primary joint sealing of concrete joints against low to medium water pressure, or to provide additional protection and security for other waterproofing systems, such as water stops, i.e. in complex detailing and structures exposed to high water pressure. The **SikaSwell®** systems can also provide effective solutions for waterproofing in difficult expo-

sure or application conditions, i.e. against seawater or water with a high salt content, during periods of heavy rainfall on site, or when rapid installation without extended waiting or curing times is needed.

### Key Advantages:

- All types of swelling and sealing technologies in one product range
- Very cost effective sealing of construction joints
- Suitable for difficult situations (i.e. environmental conditions or access)
- Products for almost all water qualities including sea water and water with a high salt content
- Can provide back-up security for other waterproofing systems
- Solutions for sealing between different materials and substrates

### Basements

**SikaSwell®** systems provide easy solutions for sealing construction joints, pipe penetrations, isolation joints and many other waterproofing details.

### Infrastructure

**SikaSwell®** products are often used as secondary sealants for other waterproofing systems to increase their security.

### Water Tanks

**SikaSwell®** systems keep water safely inside water tanks, sealing construction joints and pipe penetrations in an easy and economic way.

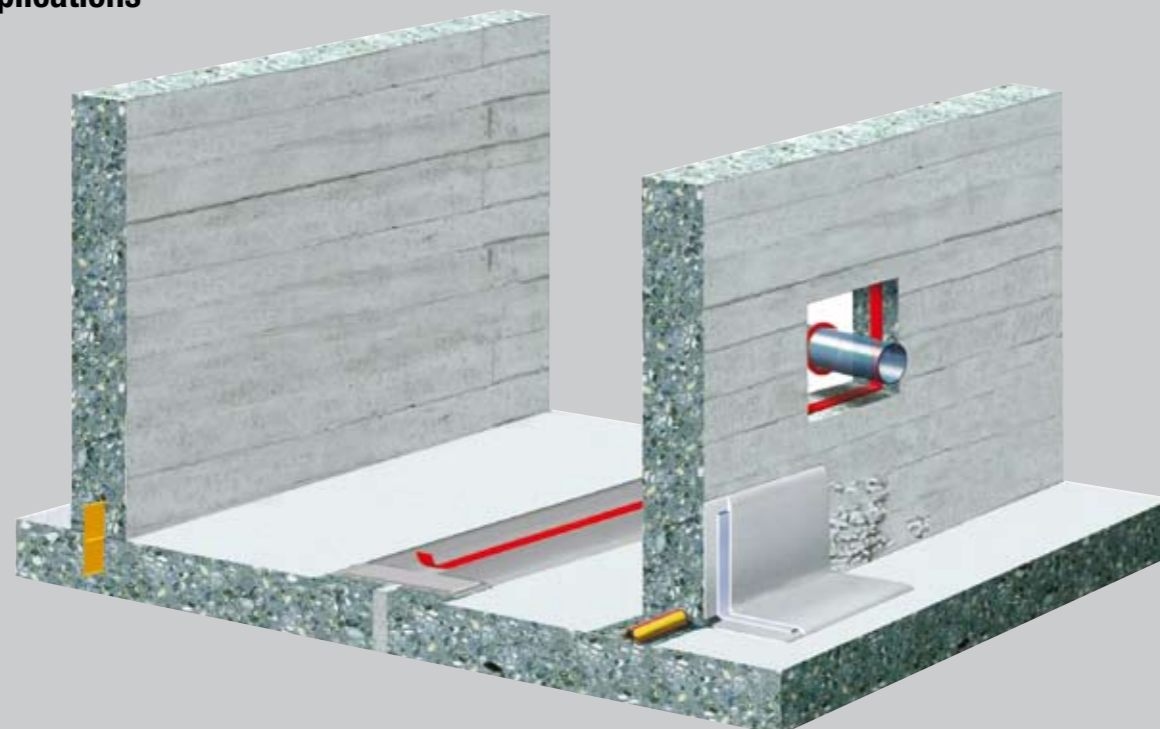
### Industrial Buildings

The high chemical resistance of **SikaSwell®** products allows secure watertight jointing solutions in and around industrial buildings and facilities.

### Refurbishment

The easy application of **SikaSwell®** systems directly onto existing structures is an important advantage; they are extremely versatile with many uses in refurbishment projects.

### SikaSwell® Typical Applications



#### Construction Joints

**SikaSwell®** solutions can be used for nearly all types of construction joints and are very advantageous in joints with difficult environmental exposure conditions or access etc.



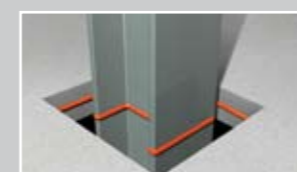
#### Waterproofing Details

**SikaSwell®** Plugs and Rings are an easy and secure way of sealing around all types of formwork spacers. Different sizes are available for most common spacer systems.



#### Penetrations

**SikaSwell®** systems provide flexible waterproofing solutions for all types of penetrations, with swellable sealants and different shaped profiles to meet all different requirements.



#### Isolation Joints

**SikaSwell®** can handle the difficult joints in isolation joints between different materials very easily and can be applied or bonded to many different substrates as well as concrete, including natural stone, metals and many plastics etc.



# SikaSwell® Systems - A Complete Range Including ALL of the Available Technologies



## SikaSwell® A



This active joint sealing system swells towards any water. The flexible properties of this material enable it to swell into small cracks or gaps. **SikaSwell® A** is based on acrylic resins.

- unique swelling properties
- proven long-term durability
- highly economic and cost effective

## SikaSwell® P



The high mechanical properties of this swellable polymer based product allow its application under difficult site conditions.

- high mechanical stability
- protective coated to withstand even heavy rain
- special profile shapes are available

## SikaSwell® Rings and Plugs



Formwork spacers are used on nearly every concrete structure and site. These swellable rings avoid the penetration of water from the outside and the swellable plugs seal the inside of the spacers.

- easy and secure in application

## SikaSwell® B



Bentonite based – one of the world's best known traditional swelling / sealing technologies. A simple solution for sealing construction joints

- long-term proven experience world wide

## SikaFuko® Swell 1 Swellable Injection Hose



**SikaSwell®** Injection Hose systems can be combined with other waterproofing systems such as water stops, for high security waterproofing. **SikaFuko® Swell 1** is ideal for this and provides a 'zero leak tolerance' solution.

- double security
- easy and secure application

## SikaSwell® S2



A one component, gun applied swellable sealant system, for fast application and suitable for use on rough surfaces. Also used as an adhesive for **SikaSwell®** profiles.

- one-component for very easy application

## SikaSwell® S3



Two component, gun applied, fast curing system which can also be rapidly applied as a swellable sealant and as an adhesive for **SikaSwell®** profiles.

- two-component fast curing system

## The SikaSwell® Waterproofing Principle

In contact with water **SikaSwell®** Profiles and Sealants develop an expansive swelling pressure. The pressure between the expanding SikaSwell and the surrounding concrete structure prevents the penetration of water through the joint and provides a durable waterproofing solution. **SikaSwell® A** Profiles can also swell and expand to fill any voids or gaps and so provide even more security.



There are also **SikaSwell®** systems specifically designed to develop these swelling pressures with seawater and water with a high salt content.

## SikaSwell® Selection Guide

	Construction Joints			Penetrations		Adhesive
	Concrete Structure	Precast Elements	Tunnel Segments	Pipes	Steel Work	
SikaSwell® A 2005						
SikaSwell® A 2010						
SikaSwell® A 2015/2025						
SikaSwell® B...						
SikaSwell® P 2003/2005						
SikaSwell® P 2010/2010 H						
SikaSwell® P 2507 H						
SikaSwell® S2						
SikaSwell® S3						

■ Ideal product for application on materials

	Long-term experience	Double safety	Rough surfaces	Medium salty water	Heavy salty water	Short waiting time between fixing and concreting	Suitable for drinking water	Rain-protection coating
SikaSwell® A								
SikaSwell® A ... M								
SikaSwell® B						*		
SikaSwell® P								
SikaSwell® P ... M								
SikaSwell® S-2								
SikaSwell® S-3								
SikaFuko® Swell 1								

■ Ideal product for application conditions

\* in case of using mesh



# SikaSwell® – Ideal for On-site Application

**SikaSwell®** systems are ideal for sealing construction joints in basements and other below ground structures with a low to medium ground water pressure. They can be applied as the primary sealing solution, or in combination with other waterproofing systems to provide additional security.

The application of **SikaSwell®** Sealants is with a standard sealant gun and they can be used as a joint sealant and also as an adhesive for **SikaSwell®** Profiles or the injection hose system **SikaFuko® Swell 1**. A typical application of **SikaSwell®** Profiles and Sealants is in the waterproofing of construction joints between floor slabs and walls.

The **SikaSwell® S2** Sealants and the Profiles, using the Sealants as the adhesive, can also be applied directly onto rough surfaces for refurbishment works, and in combination with other waterproofing systems such as **SikaFuko® VT 1** injection hoses, to seal connection joints between new and existing buildings or structures for example”.



# Case Studies

## Peugeot Centre, Moosseedorf, Switzerland

**Project Description:**  
New construction of car workshops and showrooms.  
Construction: 2005 – 2006

**Project Requirements:**  
Sealing 800 m of construction joints against ground water pressure.  
The footprint of the overall structure is approximately 120 × 60 m.

**Sika Solution:**  
**SikaSwell® P 2507 H**  
**SikaSwell® S-2**  
**Sika® Waterbar AR 28**  
**SikaFuko® Swell 1**  
(former **Sika® Injectoflex HPM**)



## Urummyh Lake, Iran

**Project Description:**  
Construction of a hydraulic water retaining structure  
Construction: 2004

**Project Requirements:**  
Sealing 2900 m of isolation joints between steel pipes and the concrete structure, with the specific requirement of being able to swell in contact with salt water.

**Sika Solution:**  
**SikaSwell® A 2010 M**  
(former **Duroseal Type S 2010**)



# Sika Full Range Solutions for Construction

## Concrete Production



**Sika® ViscoCrete®**  
**Sika® Retarder®**  
**Sika® SikaAer®**

## Basement 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



**Sikaplan®**  
**Sarnafil®**  
**SikaRoof® MTC®**

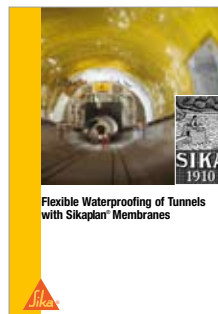
## Other available Sika Waterproofing brochures:



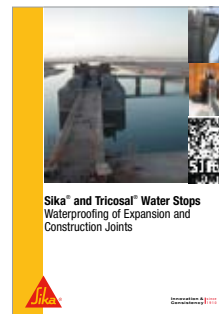
Watertight Concrete Basements  
 with Sika® Concrete, Jointing,  
 and Injection Technology



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



SikaFuko® Injection Hose Systems  
 Unique Waterproofing Solutions  
 for Construction Joints

**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

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

