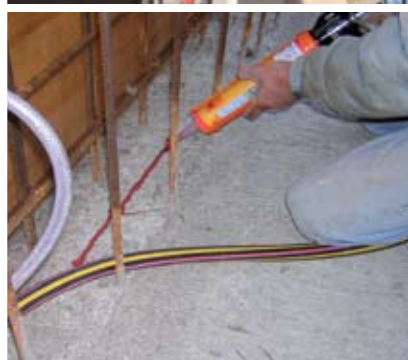
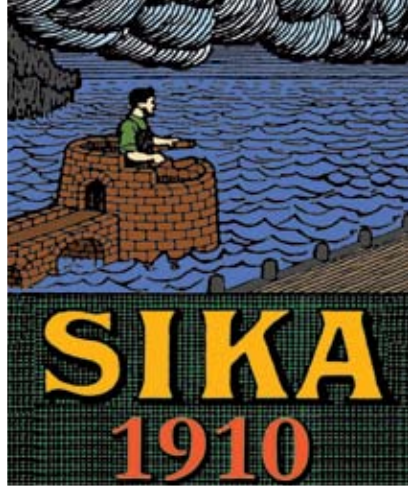


Construction



## **SikaSwell®**

Swellable Profiles and Sealants  
for Active Waterproofing



Innovation & Consistency | since 1910

# Active Waterproofing for Construction Joints, Pipe Penetrations and Other Details



## Introduction

SikaSwell® swellable profiles and sealants are an internationally tested and proven range of extremely cost effective hydrophilic materials. They are easily applied into joints and around penetrations in concrete, normally with no additional work required to the reinforcement or formwork.

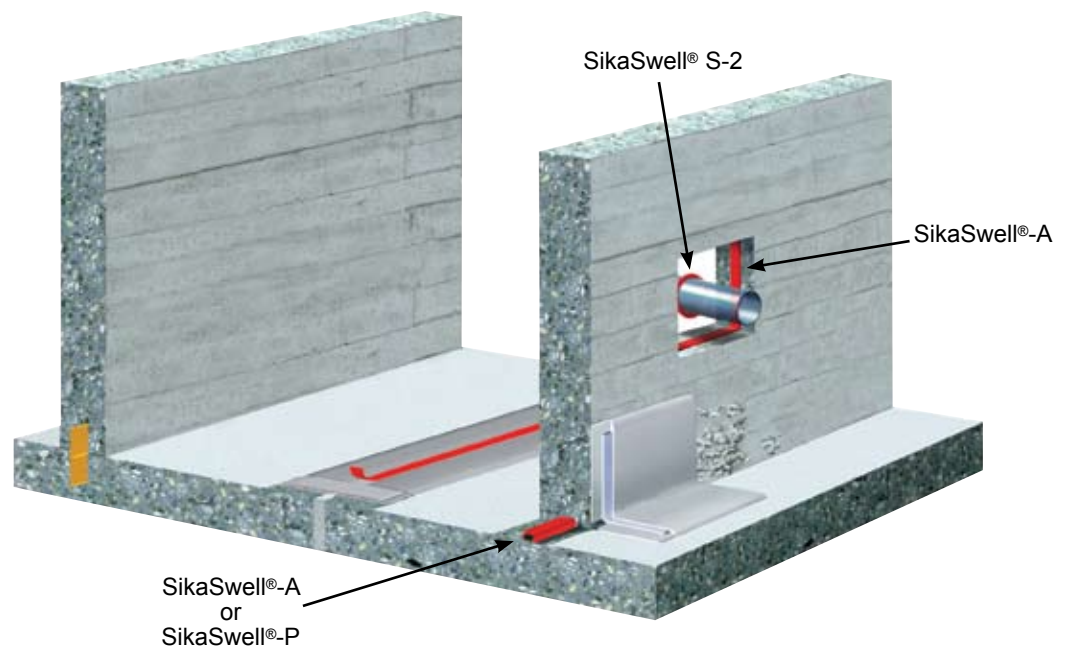
The SikaSwell® product range includes solutions for sealing construction joints, pipe penetrations, precast sections and isolation joints i.e. between concrete and steel components. They can be used for the primary joint sealing of concrete joints against low to medium water pressure, or to provide additional protection and security for other waterproofing systems, such as water stops, i.e. in complex detailing and structures exposed to high water pressure.

SikaSwell® can also provide effective solutions for waterproofing in difficult application conditions, i.e. 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. access)
- ▲ Can provide back-up security for other waterproofing systems
- ▲ Solutions for sealing between different materials and substrates

## Where to Use





# Typical Applications



## Construction

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



## Water Tanks

SikaSwell® materials keep water safely inside tanks, sealing construction joints and pipe penetrations in a simple and economic way.



## Infrastructure

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



## Industrial Buildings

SikaSwell® products possess high chemical resistance allowing secure watertight jointing solutions in and around industrial buildings and facilities.



## Refurbishment

SikaSwell® systems are easy to install directly onto existing structures which is an important advantage; they are extremely versatile with many uses in renovation projects.



### Construction Joints

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



### Pipe Penetrations

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



### Isolation Joints

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

# A Selection of the Available Technologies



## SikaSwell®-A



This active joint sealing system swells in contact with any water. The 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
- ▲ Coated to withstand even heavy rain
- ▲ Special profile shapes are available

## SikaSwell® S-2



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

- ▲ One-component for very easy application
- ▲ Allows sealing of complex details
- ▲ Easier and quicker to install



## 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 small voids or gaps and so provide even greater 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 Structures	Precast Elements	Tunnel Segments	Pipes	Steel Works	
SikaSwell®-A						
SikaSwell®-P						
SikaSwell® S-2						

  Ideal product for application on materials

	Long-term Track Record	Rough Surfaces	Medium Salt Content in Water	Rain-protection Coating
SikaSwell®-A				
SikaSwell®-P				
SikaSwell® S-2				

  Ideal product for application conditions



# Ideal for On-Site Application

SikaSwell® systems are ideal for sealing construction joints in basements and other below grade structures subject to low-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® S-2 sealant is carried out with a standard sealant sausage gun. A typical application of SikaSwell® profiles and sealants is for waterproofing of construction joints between floor slabs and walls.

The SikaSwell® S-2 sealant and the SikaSwell® profiles, using the sealant as the adhesive, can also be applied directly onto rough surfaces for renovation works. In combination with other Sika waterproofing systems they can also seal connection joints between new and existing buildings or structures.



# Case Studies

## Pharmaceutical Building Mississauga, ON, Canada

### Project Description:

Pharmaceutical office building

**Construction:** 2010

### Project Highlights:

SikaSwell®-A was used instead of the traditional bentonite hydrophilic waterstop to seal out water between new and existing concrete segments. Being less than half the weight of the bentonite type material the contractor previously used, the workers appreciated the way the material could be easily transported and installed, even in tight and cramped working areas. Adhesion on rough and irregular surface was also another key feature that contributed to the overall productivity of the application team. From the supervisor's perspective, verifying installation was greatly enhanced thanks to the high visibility of the material.

### Sika Solution:

SikaSwell®-A 2010

## Peugeot Löwen-Garage AG Moosseedorf, Switzerland

### Project Description:

Construction of a new Peugeot dealership. Upon completion, about 90 employees will work at the Moosseedorf site.

**Type of Construction:** Car dealership with showrooms, offices spaces and workshops.

**Construction:** 2005 – 2006

### Project Highlights:

Sealing 800 m (2625 ft) of construction joints against ground water pressure. The footprint of the overall structure is approximately 120 × 60 m (394 x 197 ft).

### Sika Solution:

SikaSwell®-P 2507 H  
SikaSwell® S-2  
Sika® Waterbar AR-28  
SikaFuko® Swell-1  
(formerly Sika® Injectoflex HPM)

## Orumieh Lake Iran

### Project Description:

Water management project on a 5200 km<sup>2</sup> (2000 mi<sup>2</sup>) salt water lake located in northwestern Iran.

**Type of Construction:** Hydraulic water retaining structure.

**Construction:** 2004

### Project Highlights:

Sealing 2900 m (9514 ft) 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  
(formerly Duroseal Type S 2010)





## SIKA: YOUR LOCAL PARTNER... WITH GLOBAL EXPERTISE



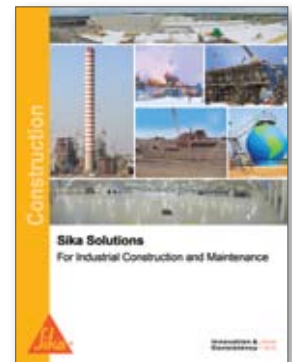
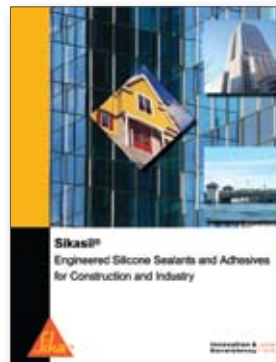
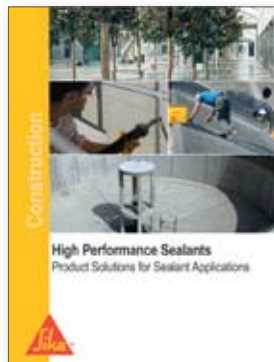
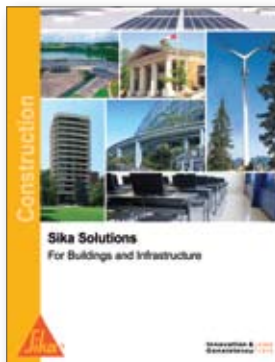
Sika Canada Inc., as a member of the international Sika Group, is a recognised leader in the field of products for the construction industry. We supply what are recognised as standard-setting and value-added systems.

Over the last 100 years, Sika's systems have earned the confidence of construction professionals everywhere thanks to their cost-effective quality, reliability and durability. An essential element in our "roof-to-floor" or "foundations upwards" capability, is our diverse range of materials which provide long-lasting performance and accommodate a wide variety of service conditions, in new-build as well as renovation. Our materials are employed in most sectors of construction, including virtually all forms of buildings, such residential, commercial, industrial, leisure, healthcare and educational structures and, likewise, in many forms of infrastructure, from transportation to utilities.

Furthermore, as part of our environmental policy, considerable attention has been devoted to ensuring that these products are as climate-friendly as possible and contribute to a sustainable future. Sika is an ISO 9001 certified company and its Pointe-Claire facility has received the ISO 14001 certification for its environmental management systems.

With Sika products, the construction industry and the built environment can count on a century of experience and the highest level of service to provide a sound foundation for partnership and successful construction projects.

*Also available:*



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, within their shelf life. 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 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 Product Data Sheet for the product concerned, copies of which will be supplied on request or can be accessed in the Internet under [www.sika.ca](http://www.sika.ca).

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