SIKA® INNOVATIVE SOLUTIONS
SEALING & BONDING

BUILDING TRUST

WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the construction and motor vehicle industries.

MORE THAN 100 YEARS OF BUILDING TRUST

Our reputation for quality and reliability is virtually unmatched, and is illustrated through a comprehensive portfolio of problem solving products that have been employed for many years in a diverse range of applications.

COURAGE FOR INNOVATION

Sika's success is based on our long lasting tradition of innovation. We provide intelligent solutions using the most advanced technologies, service and unique expertise. All Sika solutions are designed with our customers' success in mind and we look to build long-lasting and mutually beneficial relationships.

SIKA PRODUCTS

Sika has core competencies in seven (7) different markets: Concrete, Refurbishment, Sealing and Bonding, Waterproofing, Flooring, Roofing and Industry, in both the construction and motor vehicle industries.

SIKA AT GLANCE

18,000+	TEAM MEMBERS
100+	COUNTRIES
200+	FACTORIES WORLDWIDE
9	NEW FACTORIES IN 2017
72	NEW PATENTS IN 2017
7	ACQUISITIONS IN 2017
CHF 6.25 BN	NET SALES IN 2017

SIKA PHILIPPINES: YOUR LOCAL TRUSTED PARTNER

Sika Philippines, Inc. is a proud member of the worldwide Sika Group, which is wholly owned by Sika AG, Switzerland. We have been serving the Philippine market since March 1994.

BUILDING AND CIVIL ENGINEERING STRUCTURES ARE FULL OF JOINTS

JOINTS IN BETWEEN construction elements can be found in different parts of a construction, e.g. between precast concrete elements in facades, around windows and doors, between floors and walls, around storage tanks, etc.

Joint sealants have to meet various requirements depending on function and location of the respective joint.

The purpose of joint sealing generally is to:

- Prevent passage of media (air, water, chemicals, smoke etc.)
- Provide thermal and sound insulation
- Enhance the visual appearance of the construction

IN A WORLD FULL OF JOINTS, SELECT THE MOST DURABLE SOLUTION AND TAKE NO RISKS.

WHY ELASTIC SEALING?

Buildings and civil engineering structures consist of individual elements which exhibit relative movements to each other. There are two kinds of such movements:

THERMAL MOVEMENTS

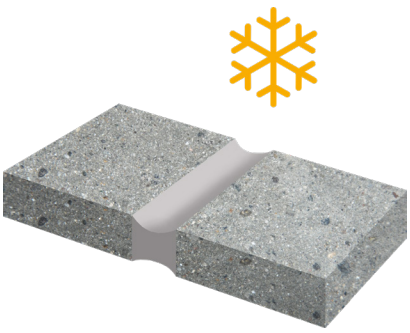
Temperature changes due to climatic, solar and weather effects results in expansion or contraction of the building elements. For the sealants connecting them, this leads to permanent movement. In case of increasing temperatures, the elements expand, the joints become smaller and the sealant is compressed. In case of decreasing temperatures, the elements shrink, the joints become larger and the sealant expands or elongates. In the latter case, the adhesion of the sealant to the substrate is crucial. Thermal movements are considerable in case of large elements or when different materials are used for example a brick wall and vinyl window frame.

STRUCTURAL MOVEMENTS

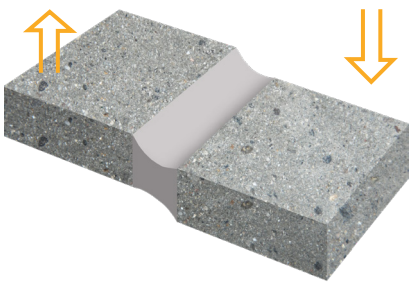
Structural movements can have several reasons. They can originate from settlement of the structure, vibrations or other loads like wind. Structural movements change the initial joint dimensions and consequently can apply considerable stress to the sealing material, often shear stress.

Movement within the joints is a reality and the long-term solution to accommodate them are high-performance elastic joint sealants. These sealants retain their original functionality and good adhesion to the substrate throughout their whole life cycle and provide durable tightness.

Expansion of building elements



Contraction of building elements



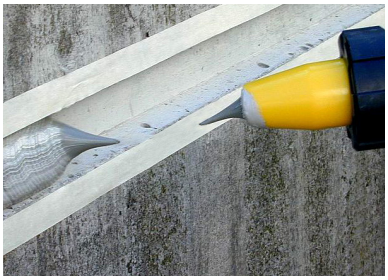
Shear movement

JOINT SEALING WITH SIKA SEALANTS IS A PLEASURE

THE APPLICATION PROPERTIES OF sealants have a direct impact on the efficiency, reliability and appearance of the joint sealing job.

DESIGNED FOR EFFICIENT APPLICATION – KEY APPLICATION ADVANTAGES

LOW EXTRUSION FORCE
For efficient application, the sealant must be easy to extrude – even at low temperatures.



SHORT CUT-OFF STRING
Avoid unnecessary cleaning. Long cut-off strings will mess up your construction elements and permanently stain them.

NON-SAG BEHAVIOUR
Sealants must stay where they are applied. Non-sag behaviour is essential when the joints are wide and in a vertical or overhead position. The rheology of Sika's facade sealants is designed not to flow or sag after application.*

GOOD "BODY" AND TACK-FREE SURFACE
To achieve a visually attractive finish, the sealant must be easy to tool. Sika sealants stand out due to their good body, tack-free surface and sufficient tooling time, even under warm and humid conditions – the prerequisite to perfectly shape and smooth out the sealant surface.

LOW SMELL AND LOW VOC
Being exposed to badly smelling products and volatile organic compounds (VOC) all day will make you feel bad. When creating our products we take care that their smell is not disturbing and the VOC meets the stringent market requirements.

AS PARTNER OF PROFESSIONAL APPLICATORS, WE KNOW WHAT COUNTS.

* For special applications like floor joints, the sealants rheology is designed to be self-levelling ensuring perfect and smooth transitions.

SIKA JOINT SEALING SOLUTIONS FOR LONG-LASTING TIGHT JOINTS

Sika provides a full range of elastic joint sealants and accessories for your construction with the following main advantages:

- Long-term elasticity to accommodate joint movements
- Good and durable adhesion to common construction materials to ensure durable tightness
- Perfect handling for efficient, reliable and attractive joint sealant application
- Visual appearance that meets the demands of architects and owners
- Excellent mechanical properties, chemical resistance and weatherability ensuring sustainable performance even under most adverse conditions and loads
- Technical support and training for architects, specifiers and applicators
- Many approvals, external testing and best references
- Global supply chain

Sika offers sealant solutions for a great variety of applications:

- Building envelope joints like precast concrete facades, glass and metal facades, natural stone facades and joints in exterior insulation and finishing systems (EIFS) for wall claddings
- Civil engineering joints in containment bunds of fuel stations, water and sewage treatment plants and swimming pools
- Interior finishing joints
- Floor joints
- Roof and flashing joints

As a market leader in construction chemicals, Sika offers comprehensive and compatible solutions from "roof to basement" for all types of buildings and civil engineering structures.

Sika has a long history in construction joint sealing. All Sika products are the fruit of many years of experience, outstanding R&D capabilities, continuous adaptation and improvement to modern construction materials and practices and state of the art production sites. As we are globally present, we can respond to your needs and local requirements wherever you are realizing projects.

Using Sika products is a decision for competence, performance, security and a reliable partner. Specify Sika products for all your construction and have one partner, one solution! Incompatibility between the different systems is an unnecessary risk that can be avoided. Sika sealants makes construction joints sustainably air and water tight. The best performance for your application is the key issue; therefore Sika produces high quality products in all major technologies.

SIKA RECOMMENDS:

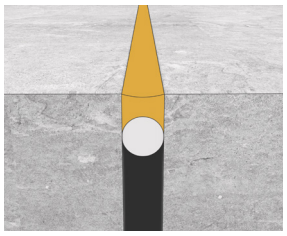
- SikaHyflex® and Sikaflex® for building envelope:
  – For non-porous substrates like metal and glass, choose Sika's innovative silicone range.
  – For porous substrates like concrete, bricks and masonry, choose Sika's advanced polyurethane sealants.
- Sikaflex® and Sikasil® for civil engineering
- Sikaflex® and Sikacryl for firerated connection and joints movement or interior finishing

Additionally, Sika offers complementary products such as PU foams, primers and backing rods to complete the sealants range.

JOINT DESIGN FOR LONG- LASTING & TIGHT BUILDING ENVELOPE JOINTS

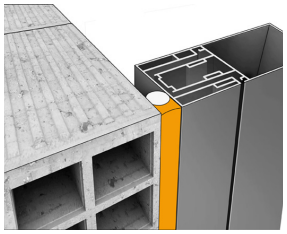
THE FACADE IS THE FACE of your building. In contemporary architecture the facade is of special interest expressed by large dimensions, unconventional shapes and high material diversity. Joint design is demanding and prone to mistakes. For integral joint specification, following some rough guidelines will result in a long-lasting and tight building envelope.

MOST COMMON MISTAKES



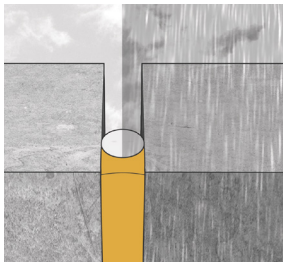
JOINT WIDTH

A joint's expected movement can be calculated from the dimensions and thermal expansion coefficients of the facade elements and the maximum and minimum temperature your facade will be exposed to. The expected movement and the sealant's movement capability leads to a minimum joint width required to withstand the daily and seasonal cyclic movement. To simplify your choice, sealants are classified according to their movement class by several standards.



MATERIALS TO BE JOINED

Depending on the design of your facade, it may consist of facade elements of different materials like concrete, glass, metal, brick or stone, just to mention the most common ones. These elements have to be sealed to each other but also to other waterproofing products like membranes or structural glazing elements consisting of glass, spacer and adhesives. The sealant must show good adhesion to the adjacent materials and at the same time must be compatible with all materials to avoid discoloration, loss of adhesion over time or any changes of properties.



ENVIRONMENTAL EXPOSURE

Environmental conditions have an impact on the service life and the performance of the sealant. Expected UV and heat exposure as well as the chemical impact must be considered when choosing the product. Additionally, when sealing between the inside and outside of the building the vapor permeability of the sealant has to be considered to avoid accumulation of water in the walls. The general rule is to use a sealant with lower vapor permeability on the warm side of the wall, as warm air is generally more humid than cold air (or the same vapor permeability but thicker applied on the inside).

APPEARANCE

Ugly joints are like scares on a facade. Therefore, when specifying the joint sealant, the visual appearance and matched color of the joint is important. When sealing natural stone or glass a products staining and streaking must be checked as this would damage the appearance of the whole facade irreversibly. In this case stone and glass must be replaced. By using non-staining and non-streaking products where required money can be saved ultimately.

MECHANICAL EXPOSURE

Floor and some wall joints are exposed to mechanical impact. (Floor: Tyres, heels, tolly, fork lift, cleaning machines (high pressure water, brushes). Wall: People that pick and play with the sealants, especially in zones where they have to wait like bus stations). This impact damages the joint sealants. Therefore choose harder sealants, with high tear propagation resistance and plan recessed floor joints to avoid contact with the wheels.

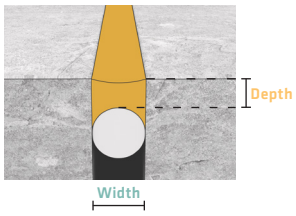
JOINT DIMENSIONING

The design of a sealing system involves more than just the selection of a sealant with suitable physical and chemical resistance. In order to obtain optimal long-term performance, the following considerations are essential as well:

- Proper joint design, including correct dimensioning and back-up material selection
- Type and nature of substrates
- Application process and ambient conditions at the time of the installation

GENERAL RULES FOR JOINT DESIGN

Movement capability of the sealant and joint width must fit to the expected movement of the adjacent building elements.



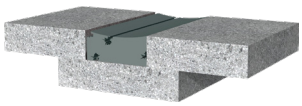
Joint width: Must be designed according to the sealants movement capability

Sealant dimensions: The optimal ratio of sealant width to depth is 2:1 for facade joints and 1:0.8 for floor joints

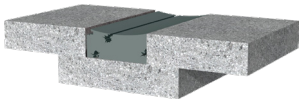
Joint depth: A joint must have sufficient depth so that backer rod and sealant fit inside.

Spacing between joints: In the following tables an example for joint dimensions for concrete elements and a sealant with 25% movement capability are given:

Facade Joints			Interior Floor Joints			Exterior Floor Joints		
Joint spacing (m)	Minim. joint width (mm)	Sealant depth (mm)	Joint spacing (m)	Minim. joint width (mm)	Sealant depth (mm)	Joint spacing (m)	Minim. joint width (mm)	Sealant depth (mm)
2	10	8	2	10	12	2	12	10
4	20	10	3	10	12	3	12	10
6	25	12	4	10	12	4	15	12
8	30	15	5	10	12	5	18	15
10	35	18	6	10	12	6	20	17
			8	10	12	8	30	25



Cohesive failure



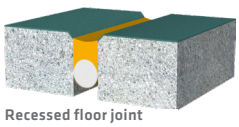
Correct use

The sealant must be capable of extending and contracting along with the building elements to which it is joined. If this is not possible the consequence may be adhesive and/or cohesive failure.

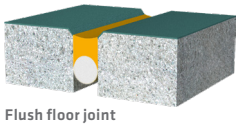
The sealant depth defines the stress at the sealant/substrate interface. If the sealant depth is too large this will lead to severe stress on the interface at low temperatures and finally adhesion failure.

3-side adhesion must be avoided. Any other adhesion than to the joint flanks leads to massive reduction of the elasticity and movement capability of the sealant and consequently to failure of the sealant.

The correct use of backing material can avoid these problems. The backer rod defines the joint depth and avoids 3-side adhesion.



Recessed floor joint



Flush floor joint

FLOOR JOINT DESIGN

Depending on the location and expected loads of a floor joint special design considerations for floor joints are necessary. Generally high modulus sealants are recommended for floor joint applications.

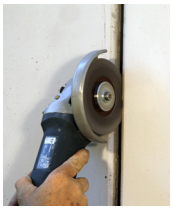
Joints in areas with a lot of car and/or equipment traffic should be recessed to reduce mechanical loads.

Joints in pedestrian areas should be flush with the surface to prevent tripping hazard. The sealant must also have a certain hardness and indentation resistance due to high mechanical impacts from narrow heels.

APPLICATION OF JOINT SEALANTS

TO CREATE VISUALLY APPEALING AND DURABLE JOINTS, you have to consider several points. A description for the procedure valid for porous substrates such as precast concrete is shown below. In the case of non-porous substrates the surface preparation is usually different, but the other steps are identical application procedure stays the same.

APPLICATION STEPS



1 **Surface preparation:**
Grind the substrate with a wire brush or other equipment tool, and remove dust and friable particles.


2 **Backer rod installation:**
Insert a fitting backer rod to the required depth. The diameter of the backing rods should be 20 – 30% larger than the joint width. If using a closed cell polyethylene backer rod, pay attention when inserting the rod not to damage it for example by using a sharp tool like a screwdriver. Use a blunt tool to insert the backer rod.

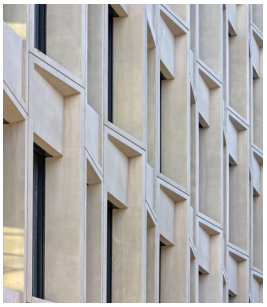

3 **Masking tape and primer application:**
If sharp and exact joint lines are required place a masking tape. Take care that the tape is well attached to the surface to avoid spread of the primer below the tape.
If necessary, apply primer in the area where the sealant is supposed to be applied later.


4 **Sealant application:**
Fill the joint with sealant avoiding air entrapment. Remove excess material.


5 **Make it look nice:**
Remove the masking tape before skin formation.
Smooth the joint sealant with smoothing liquid for a perfect finish.

SEALANTS DEDICATED TO CONCRETE AND MASONRY FACADE JOINTS

	Sikaflex® Construction	SikaHyflex-160 Construction	SikaHyflex-250 Facade
			
Chemical Base	1-component Polyurethane	1-component *i*-cure Technology Polyurethane	1-component *i*-cure Technology Polyurethane
Movement Capability	±25% (ISO 9047)	±35% (ASTM C719) ±25% (ISO 9047)	+100%-50% (ASTM C719) ±25% (ISO 9047)
Benefits	■ One component, ready to use ■ Fast-curing ■ Non-sag ■ Can be overpainted (over paintability test must be conducted) ■ Bubble-free curing	■ High movement capability ■ Bubble-free curing ■ Can be overpainted (over paintability test must be conducted) ■ Good adhesion to many substrates ■ Solvent-free ■ Very low emissions	■ Very good weathering resistance ■ Suitable for EIFS – low stress to substrate ■ Non-staining ■ Bubble-free curing ■ Very low emissions
Typical Application	Suitable for indoor and outdoor application (e.g concrete precast)	Designed for movement and connection joints in concrete and masonry facade	Designed for the elastic joint sealing and waterproofing of movement and connection joints in building envelopes. Suitable for EIFS facades
Technical approvals	ASTM C 920 ISO 11600 LEED Attestation	EN 15651-1 ISO 11600 ASTM C 920 EMICODE-EC1 PLUS LEED Attestation	EN 15651-1 ISO 11600 ASTM C 920 DIN 18540 ISO 16938-1 (Non-staining) ASTM C 1248 (Non-staining) EMICODE EC1 PLUS R M1 Certificate LEED Attestation EN 10140 (Sound insulation) ISO 19862
Color	White, Concrete Grey	Concrete Grey	Concrete Grey
Packaging	600ml/sausage (20 pieces per box)	600ml/sausage (20 pieces per box)	600ml/sausage (20 pieces per box)



Sika is one of the world's largest producers of polyurethane based sealants, adhesives and coatings. Sika polyurethanes are omnipresent in construction and industrial applications. Our products are widely used in structural and civil engineering but also in production and assembly of goods for marine, aviation and automotive. With decades of experience, know-how and permanent innovation, Sika is the first choice for high performance polyurethane products.

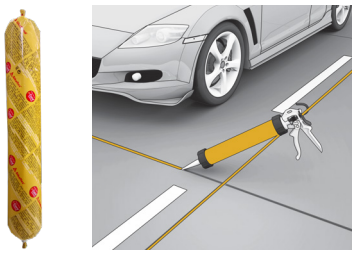
Sika polyurethane *i*-Cure technology has several advantages compared to MS, silicone and conventional polyurethane sealant technology:

- Better adhesion to porous substrates
- Superior tear propagation resistance
- Suitable for use on damp substrates, for example, after rainfall

Powered by *i*-Cure® Technology

i-Cure is Sika's innovative solution for bubble free curing sealants.

FIRERATED SEALANTS AND SEALANTS DEDICATED TO TRAFFICABLE AND SPECIALTY JOINTS

	Sikacryl-620 Fire	Sikaflex®-400 Fire	Sikaflex® PRO-3
			
Chemical Base	1-component Acrylic Dispersion	1-component Polyurethane	1-component *i*-cure Technology Polyurethane
Movement Capability	-	±25% (ISO 9047) ±25% (ASTM C719)	±35% (ASTM C 920) ±25% (ISO 9047)
Benefits	■ Up to 5 hours fire resistance according to EN 1366-4 ■ Up to 2 hours fire resistance according to EN 1366-3 ■ Water-based ■ Can be overpainted (over paintability test must be conducted)	■ Up to 4 hours fire resistance according to AS 1530.4 ■ Up to 4 hours fire resistance according to AS 1366-4 ■ High movement capability ■ Can be overpainted (over paintability test must be conducted) ■ Long open time ■ Good adhesion to many different substrates	■ High movement capability ■ Very high mechanical and chemical resistance ■ Bubble-free curing ■ Water resistant ■ Diesel and jet fuel resistant ■ Solvent-free and odorless
Typical Application	Designed for fire rated connection joints and penetration seals on porous and non-porous substrates. Suitable for interior applications.	Designed for fire rated movement connection joints and penetration seals on porous and non-porous substrates. Suitable for interior and exterior applications.	■ Movement and connection joints in floors ■ Pedestrian and traffic areas (e.g. parking decks, car parks) ■ Warehouses and production areas ■ Applications in the food industry ■ Joints in waste water and sewage treatment plants ■ Floor joints in tunnel construction ■ Applications in cleanrooms
Technical approvals	EN 15651-1 ISO 11600, EN 15651-1 EN 1366-3 EN 1366-4 ETAG 026 EN 13501-2 EN 140-3 EN 13501-1 class B-s1-d0 BS 476-20 UL Listing (UL 2079) EMICODE LEED Attestation	AS 1530.4 linear seals 1 AS 1530.4 linear seals 2 AS 1530.4 penetration seals EN 13501-2 ASTM C 920 ISO 11600 EN 15651-1 LEED Attestation	ISO 11600 EN 15651-4 EN 14188-2 ASTM C920 ASTM C1248 ISO 16938-1 BS 6920 Drinking Water Approval Test Report for Water Waste (DIBT) Test Report for Fuel Diesel Resistance (DIBT) Approval for Food Compatibility (ISEGA) Approval for Cleanroom (CSM biological resistance) Approval for Cleanroom (CSM TVOC) EMICODE EC1^{PLUS} LEED Attestation Sikaflex_PRO-3 chemical_resistance
Color	White, Grey	Grey	Concrete Grey
Packaging	600ml/sausage (20 pieces per box)	600ml/sausage (20 pieces per box)	600ml/sausage (20 pieces per box)

Powered by i-Cure® Technology

i-Cure is Sika's innovative solution for bubble free curing sealants.

PU FOAM, PRIMER & AUXILIARY

Sika® Boom

Chemical Base	One-part Polyurethane
Benefits	■ Multi-positioning foam, can be applied in all positions (360⁰) ■ High expanding rate ■ Fast-curing ■ Excellent temperature insulation and effective sound dampening ■ HFC-free
Typical Application	■ Connection joints around window and door frames, pipe entries around air conditioning vent and roller blind housing, etc. ■ Used to insulate against sound, cold draughts, etc.
Color	Light Yellow
Packaging	500 ml can (12 pieces per box)

Sika® Primer 3N

Chemical Base	Solvent-based epoxy resin compound
Benefits	■ Easy to apply ■ Water repellent ■ Short flash-off time
Typical Application	Designed for Sikaflex®, SikaHyflex, and Sikasil® products used on porous substrates (e.g. concrete) and metals
Color	Transparent
Packaging	1 Liter bottle (4 pieces per box)

Sika® Backer Rod PH

Chemical Base	Extruded Polyethylene Foam
Typical Application	Backing material before sealant application
Color	White
Packaging	200 pieces per pack
Size	8mm x 3.5m 12mm x 3.5m 15mm x 3.5m 20mm x 3.5m 25mm x 3.5m 30mm x 3.5m

Sika Heavy Duty Gun

	-
	For easy sealant application
	-
	1 piece per pack
	Use for 600ml sausage sealant

SIKA® FULL RANGE SOLUTIONS FOR CONSTRUCTION & INDUSTRY

Concrete

Refurbishment

Sealing & Bonding

Waterproofing

Flooring

Roofing

FFI

Industry

WHO WE ARE
Sika AG, Switzerland, is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, façades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting loadbearing structures. Sika's product lines feature high quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

SIKA PHILIPPINES
Sika Philippines, Inc., a wholly-owned subsidiary of the Sika Group, has been serving the Philippine Market since March 1994.

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

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BUILDING TRUST