



# SIKA® INNOVATIVE SOLUTIONS REFURBISHMENT

STRUCTURAL BONDING & GROUTING, CHEMICAL ANCHORING,  
CONCRETE REPAIR, RESTORATION AND PROTECTION

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.

## 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 A GLANCE

18,000+	TEAM MEMBERS
100+	COUNTRIES
200+	FACTORIES WORLDWIDE
9	NEW FACTORIES IN 2017
74	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.



## INNOVATIVE SOLUTIONS FOR TODAY'S GREATER DEMANDS

As far back as the 1960's, Sika was actively involved in producing products to bond elements of pre-stressed concrete bridge units together. This pioneering experience in bonding technology is still broadly in use worldwide today. Sika Adhesives are used in many different areas of construction and building, as well as industrial and manufacturing applications. Sika offers a wide range of fluid cement and synthetic resin mortars. These mortars, which can be poured or injected, are used for fixing precast elements together or filling of voids under machine bases and base-plates. The fluid characteristics of grouting mortars are ideal for filling small gaps and hollow spaces and also protect pre-stressed cables in ducts and permanent anchors.

Sika has also developed fundamental procedures and pioneering products for the permanent repair and protection of decaying and damaged concrete. Sika was the first manufacturer to develop and introduce into the world market carbon fibre technology for reinforcing and strengthening of concrete structures. Our skills for producing new innovative products like these, together with economic thinking for sustainable solutions are keys to meet customer demands in today's growing market.

# SIKA STRUCTURAL BONDING & GROUTING, CONCRETE REPAIR, RESTORATION AND PROTECTION

## Technology and Quality

Unique quality management procedures enable Sika to produce products all over the world with similar quality and performance. Utilizing a centralized research and development department for products with global markets, Sika introduces products through equally competent regional research centers. These centers test and facilitate the introduction of new products to suit specific local requirements. Sika's development advances includes polymer adhesives, special adhesives, fluid polymer and cement grouts, adhesives with dampening functions for rails and injection grout for post tensioning structures.

Typical Application	Sika Solutions	Special Performance
Corrosion Protection of Reinforcing Steel	SikaTop® Armatec-110 EpoCem	Bonding primer and reinforcement corrosion protection
Repair Mortar	SikaTop® -122	Two-component, cement based polymer modified, repair mortar with added polyamide fibres, to form a high strength repair and levelling mortar for concrete
	SikaTop®-121	Two-part cement based polymer modified trowelable paste, adhesive and filling compound for protection and repair of concrete and metal surfaces
	SikaQuick -2500 ID	Very rapid hardening repair mortar
	SikaRepair-224	One-component, cementitious, sprayable mortar for structural repairs
	Sikagard®-720 EpoCem® HC	Super fine epoxy-cement sealing mortar
Protective Coating	Sikagard -62	Two-pack total solid (Acc. Test method of "Deutsche Bauchemie*") high build coating material based on epoxy resin
Hydrophobic Impregnation	Sikagard -704 S	One-component, low viscosity, reactive impregnation for concrete and cementitious substrates based on a mixture of highly active silanes and siloxanes
Injection Material	Sikadur® -752	Solvent-free, two-component super low viscosity-liquid, based on high strength epoxy resins specially for injecting into cavities and crack in concrete
Sealing of Joints	Sikaflex® Range	Movement joint sealant to protect the concrete structure from aggressive media entering through the joints
Structural Putty & Adhesive	Sikadur®-31 CF Normal	Solvent-free, moisture tolerant, thixotropic, structural two part adhesive and repair mortar, based on a combination of epoxy resins and special fillers
Bonding Agent (Structural Grade)	Sikadur®-732	Solvent-free, thixotropic, 2-component structural epoxy resin adhesive which provides a perfect bond for new concrete from old concrete
Epoxy Resin Grouting	Sikadur®-42 MP Normal HC	Three-component, multi-purpose, moisture tolerant, epoxy grouting system
Water Resistant Bonding Agent For Mortar	SikaCem Bond	Synthetic rubber emulsion for adding to cement mortars where good adhesion and water resistance are required
Structural Grout	SikaGrout-212 SikaGrout-215	Shrink compensated, self levelling, cementitious grouting mortar with extended working time to suit local ambient temperature
	SikaGrout® UW MY	Shrinkage compensated cementitious grout for underwater application
Expanding Grout	Sikadur®-53	Water displacing epoxy resin grout
	Intraplast Z	Expanding grout admixture that works by introducing micro bubbles into the mix
Skimcoat	Sika® Brefill	Cement-based filling and refilling plaster for concrete surfaces
Tile Adhesive	Sika® Ceram-100 P	Single component, pre-packed tiling adhesive mortar combining cement with selected grades of sand and several admixtures

# PROJECT PHASES OF THE CONCRETE REPAIR AND PROTECTION PROCESS

## IN ACCORDANCE WITH EUROPEAN STANDARD EN 1504-9

### 1. Information about the Structure

A study is carried out at the beginning of a project to collect information about the structure. This may include:

- General condition and history
- Documentation e.g. calculations, drawings and specifications etc.
- Repair and maintenance schedule

This information will provide valuable data to understand the existing condition of the structure

### 2. Process of Assessment

In-depth condition survey shall be made of the visible and not readily visible defects of a structure to address the root causes of the damage. This will be used to assess the ability of the structure to perform its function.

The survey and its assessment shall only be carried out by a suitably qualified and experienced person.

In the event of not carrying out any repairs to the concrete structure a qualified Engineer may give an estimation of the remaining service life.

The aim of a concrete survey is to identify defects.

- Types of defects to the concrete
  - Mechanical
  - Chemical
  - Physical
- Defects in concrete due to reinforcement corrosion

### 3. Management Strategy

Based on the assessment of the survey, the owner has a number of options to be selected while deciding the relevant actions to meet the future requirements of the structure.

For example the **repair options** can be defined from the following:

- Do nothing or downgrade the capacity without repair
- Prevent or reduce further damage
- Repair all or part of the structure
- Reconstruction of all or part of the structure
- Demolition

**Important factors when considering these options:**

- Intended design life following repair and protection
- Required durability or performance
- Safety issues during repair works
- Possibility of further repair works in the future including access and maintenance
- Consequences and likelihood of structural failure
- Consequences and likelihood of partial failure

**And environmentally:**

- Protection from sun, rain, frost, wind, salt and/or other pollutants during the works
- Environmental impact of; or restrictions on the works in progress
- Noise and dust pollution
- Time needed to carry out the work etc.

**Future maintenance:**

Any future inspection and maintenance work that will need to be undertaken during the defined service life of the structure, shall also be defined as part of the management strategy.

### 4. Design of Repair Work

The relevant protection and repair principles will be defined from EN 1504-9 and the repair options contained in the management strategy.

The design philosophy for repair shall take into consideration the following:

- Type, causes and extend of defects
- Future service conditions
- Future maintenance program

Following the selection of the relevant principles from EN 1504-9, the Design Engineer shall also consider the **intended use** of the structure.

In the case of concrete refurbishment the specifications can be drawn up based on the requirements of the relevant parts 2 to 7 of EN 1504 (e.g. freeze and thaw cycles in external situations where appropriate).

It is important to consider this work not only the long-term performance of the structure, but also the effect of the selected materials on the rest of the structure i.e. no adverse effect.

### 5. Repair Work

Based on the relevant principles selected from EN 1504, the appropriate method of work is then based on:

- Site access
- Site conditions (e.g. selection of appropriate repair method – patch repair, pouring or spray application)
- Health and safety issues
- etc.

The surface preparation, application and Quality Control procedure for the repair works shall be carried out in accordance with the recommendations contained in Part 10 of EN 1504.

### 6. Acceptance of Repair Work

Complete records of all the materials used in the works shall be provided for future reference at the end of each project. These shall include the answer to these following issues:

- What is the anticipated new life expectancy?
- What is the mode and result of the selected materials eventual deterioration, i.e. chalking, embrittlement, discolouration or delamination?
- What is the inspection period?
- What remedial work might be required in case of deterioration?



# THE ROOT CAUSE (S) OF CONCRETE DAMAGE AND DETERIORATION PROCESS

ASSESSMENT FROM THE CONDITION SURVEY AND THE RESULTS OF LABORATORY DIAGNOSIS.

## Concrete Defects and Damage

## Concrete Damage due to Steel Reinforcement Corrosion

### Mechanical attack

#### Cause

- Impact
- Overloading
- Movement
- Vibration
- Earthquakes
- Explosion

#### Relevant principles for repair and protection

- Principles 3, 5
- Principles 3, 4
- Principles 3, 4
- Principles 3, 4

### Chemical attack

#### Cause

- AAR Alkali aggregate reactions
- Aggressive chemical Exposure
- Bacterial or other biological action
- Efflorescence / leaching

#### Relevant principles for repair and protection

- Principles 1, 2, 3
- Principles 1, 2, 6
- Principles 1, 2, 6
- Principles 1, 2

### Physical attack

#### Cause

- Freeze/thaw action
- Thermal movement
- Salt crystal expansion
- Shrinkage
- Erosion
- Abrasion and wear

#### Relevant principles for repair and protection

- Principles 1, 2, 3, 5
- Principles 1, 3
- Principles 1, 2, 3
- Principles 1, 4
- Principles 3, 5
- Principles 3, 5

### Chemical attack

#### Cause

Carbon dioxide (CO<sub>2</sub>) in the atmosphere reacting with calcium hydroxide in the concrete pore liquid.

$$\text{CO}_2 + \text{Ca}(\text{OH})_2 \rightarrow \text{CaCO}_3 + \text{H}_2\text{O}$$

Soluble and strongly alkaline pH 12 - 13 → almost insoluble and much less alkaline pH9.

Steel protected (passivation) → steel unprotected.

#### Relevant principles for repair and protection

- Principles 1, 2, 3, 7, 8, 11

### Corrosive contaminants e.g. Chlorides

#### Cause

Chlorides accelerate the corrosion process and can also cause dangerous "pitting" corrosion.

At above 0.2 - 0.4% concentration in the concrete chlorides can break down the passive oxide protective layer on the steel surface.

Chlorides are typically from marine/salt water exposure and/or the use of de-icing salts.

#### Relevant principles for repair and protection

- Principles 1, 2, 3, 7, 8, 11

### Stray electrical current

#### Cause

Metals of different electropotential are connected to each other in the concrete and corrosion occurs.

Corrosion can also be due to stray electrical currents from power supply and transmission networks.

#### Relevant principles for repair and protection

- No specific Repair Principles defined at this time.
- For repair of the concrete use Principles 2,3,10



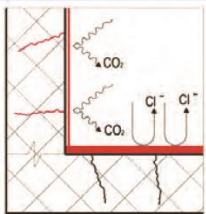
# AN OVERVIEW OF THE PRINCIPLES OF CONCRETE REPAIR AND PROTECTION

ACCORDING TO EN 1504-9

The repair and protection of concrete structures require relatively complex assessment and design. By introducing and defining the key protection, EN 1504-9 helps owners and construction professionals to fully understand the problems and solutions throughout the different stages of the repair and protection process.

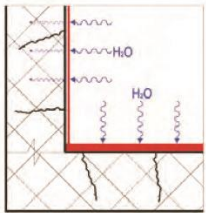
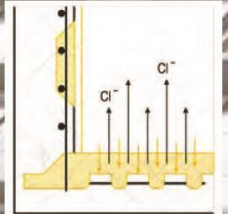
## The Principles Relating to Concrete Defects

## The Principles Relating to Steel Reinforcement Corrosion



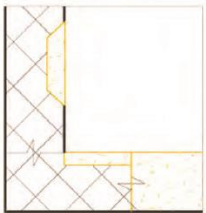
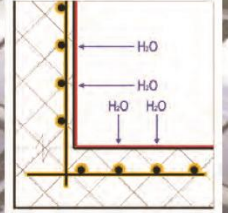
**Principle 1 (PI)**  
**Protection against ingress**

**Principle 7 (RP)**  
**Preserving or restoring passivity**



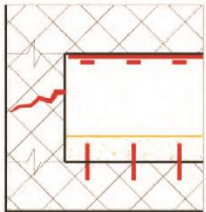
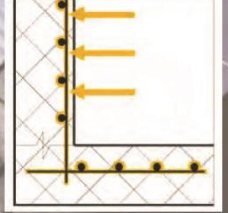
**Principle 2 (MC)**  
**Moisture control**

**Principle 8 (IR)**  
**Increasing resistivity**



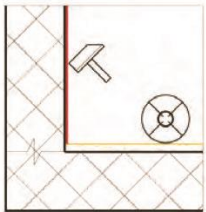
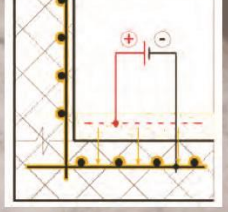
**Principle 3 (CR)**  
**Concrete restoration**

**Principle 9 (CC)**  
**Cathodic control**



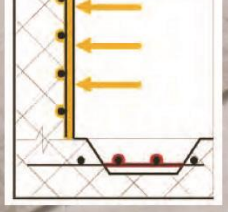
**Principle 4 (SS)**  
**Structural strengthening**

**Principle 10 (CP)**  
**Cathodic protection**



**Principle 5 (PR)**  
**Increasing physical resistance**

**Principle 11 (CA)**  
**Control of anodic areas**



**Principle 6 (RC)**  
**Resistance to chemicals**

# THE PRINCIPLES OF CONCRETE REPAIR AND PROTECTION

## EXPERTISE AND EXPERIENCE FROM SIKA

### Why Principles?

For many years the different types of damage and the root causes of this damage have been well known and equally, the correct repair and protection methods have also been established. All of this knowledge and expertise is now summarized and clearly set out as 11 Principles in EN 1504, Part 9. These allow the engineer to correctly repair and protect all of the potential damage that can occur in reinforced concrete structures. Principles 1 to 6 relate to defects in the concrete itself, Principles 7 to 11 relate to damage due to reinforcement corrosion.

The European Union fully introduced all of the European Standards 1504 on 1st January 2009. These Standards define the assessment and diagnostic work required, the necessary products and systems including their performance, the alternative procedures and application methods, together with the quality control of the materials and the works on site.

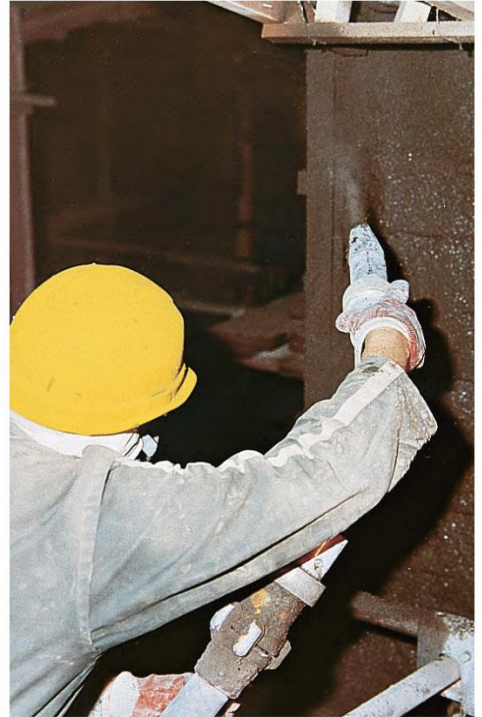
### The Use of the EN 1504 Principles

To assist owners, engineers and contractors with the correct selection of repair Principles, Methods and then the appropriate products, together with their specification and use, Sika has developed a useful schematic system of approach.

### The Sika Solutions in Accordance with EN 1504

Sika is a global market and technology leader in the development and production of special products and systems for construction. The "Repair and Protection" of concrete structures is one of Sika's core competencies, with the Sika range including concrete admixtures, resin flooring and coating systems, all types of waterproofing solutions, sealing, bonding and strengthening solutions, as well as the complete range of products developed specially for the repair and protection of concrete structures. These Sika products have all relevant international approvals and are available worldwide through the local Sika companies and our specialist contracting and distribution partners.

During the past 100 years, Sika has gained extensive experience and expertise in all aspects of concrete repair and protection, with documented project references dating back to the 1920's. Sika provides ALL of the necessary products for the technically correct repair and protection of concrete, ALL of which are fully in accordance with the Principles and Methods now defined in European Standards EN 1504. These include systems to repair damage and defects in the concrete and also to repair damage caused by steel reinforcement corrosion. Special Sika products and systems are also available for use on many different specific types of structures and for carrying out concrete repair works in all different application, climatic and exposure conditions.





# EN 1504-9 PRINCIPLE 4: STRUCTURAL STRENGTHENING (SS)

INCREASING OR RESTORING THE STRUCTURAL LOAD CAPACITY



Whenever there is a need for structural strengthening due to a change of the structures designation, or increase in the structural load bearing capacity for example, the analysis must be performed by a qualified structural engineer. Various methods are available to achieve the necessary strengthening and these include: adding external support or embedded reinforcement, by bonding external plates, or by increasing the dimensions of the structure. The selection of the appropriate methods is dependant on the different project parameters such as the type of structure, cost site environment and conditions, plus access and maintenance possibilities etc.

Sika has pioneered the development of many new materials and techniques in the field of structural strengthening. Since the early 1960's, this has included the development of steel plate bonding and epoxy structural adhesives. In the 1990's, Sika began working on the adaptation of these techniques using modern composite materials, particularly pultruded carbon fibre plates (**Sika® CarboDur**). Since then, Sika has further developed this technology by using unidirectional fabrics (**SikaWrap**) based on several different fibre types(carbon, glass, etc.). Injecting and seating cracks generally does not structurally strengthen a structure.



However, for remedial work or when temporary overloading has occurred, the injection of low viscous epoxy resin based materials can restore the structure to its original structural condition. The introduction of prestressed composite reinforcement for strengthening has now brought this technology to another level. This uses high strength, lightweight carbon fibre reinforced plates, plus curing time are reduced and the application conditions can be extended through innovative electrical heating of the adhesive. These innovations serve to further demonstrate that Sika is that clear global leader in this field.

**Refer to specific Structural Strengthening brochure, available upon request.**

# GROUTING & REPAIR MORTAR



## SikaGrout® -212

Shrinkage compensated grout

### Uses:

Suitable for the following grouting works:

- Machine Foundations
- Rail beds
- Columns in precast construction anchor bolts
- Bridge bearing cavities
- Gaps
- Recesses

### Key Advantages:

- Good dimensional stability and excellent flow ability
- High strengths, adjustable consistency
- Ready and easy to use & economical
- Impact and vibration resistant



## SikaGrout® -215

Pumpable shrinkage compensated cementitious grout

### Uses:

Suitable for repairs to concrete structures and the following grouting works with clearance of 10mm or more:

- Machine Foundations
- Rail beds
- Columns in precast construction
- Concrete anchors
- Bridge bearing cavities
- Gaps
- Recesses

### Key Advantages:

- Highly early strength and high ultimate strength
- Chloride and iron-free
- Extended working time
- Non-toxic, non-corrosive



## Sikadur®-42 MP Normal HC

3-part, multipurpose epoxy grouting system

### Uses:

*High-strength grouting and fixing of:*

- Starter bars
- Anchors
- Fasteners
- Tie rods
- Crash barrier posts
- Fence and railing posts

*Under-grouting and bedding of:*

- Base plates
- Machine bases, seat base-plates for light and heavy machinery including heavy impact and vibratory machinery, reciprocating engines, compressors, pumps, presses, etc.
- Bridge bearings
- Mechanical joints (i.e. road/bridge/deck types, etc.)

*Sleeper-less, direct rail fixing:*

- Crane tracks
- Light rail and permanent way over bridges
- Light rail and permanent way in tunnels

### Key Advantages:

- High early strength
- Non-shrink
- Stress and impact resistant
- High compressive strength
- Ready-to-mix, pre batched units
- Moisture tolerant
- Corrosion and chemically resistant
- High vibration resistance
- Low coefficient of thermal expansion



## SikaGrout® UW MY

Shrinkage compensated cementitious grout for underwater applications

### Uses:

SikaGrout® UW MY can be used for free flowing or pumped grout applications under water, for reinstating concrete such as:

- Bridge columns
- Pillars
- Piles
- Spillways
- Dams

### Key Advantages:

- There is no significant "wash out" of cement phase when placed underwater
- Effectively displaces water
- Shrinkage compensating properties
- High early & 28-day strengths
- Does not segregate or bleed
- Good impact, vibration and thermal resistance
- Non-corrosive to steel or iron



## Sikadur® -53

Water displacing epoxy resin grout

### Uses:

Sikadur®-53 may be used for underwater and dry grouting work and offers excellent adhesion to both dry and clean water immersed concrete, stone masonry, brick, wood or steel surfaces.

### Key Advantages:

- Suitable for dry, wet, underwater or marine applications
- High mechanical strengths
- Highly insoluble in water and suitable for application by specialist divers
- Excellent chemical resistance to water, sea water, waste water, sewage, fuels, oils, dilute acids and dilute alkalis



### SikaTop®-121

Polymer modified patching and adhesive mortar

#### Uses:

- Filling compound to level off irregularities and fill blowholes and fine honeycomb
- Adhesive for floor and wall tiles
- Rendering for reservoirs
- Bonding mortar between new and old concrete

#### Key Advantages:

- Easy to mix and apply
- Good mechanical strengths
- Excellent adhesion
- Non-toxic



### SikaTop®-122

Fibre reinforce, Polymer modified repair mortar

#### Uses:

As an economical and easy to use concrete repair mortar, suitable for:

- Bridges
- Water retaining structures
- Repairing honeycombs
- Concrete repair in general

#### Key Advantages:

- Easy to mix and apply
- Good mechanical strengths
- Increase resistance to salt water, chlorides and carbonation
- High abrasion resistance



### SikaRepair-224

One-component, cementitious, sprayable mortar for structural repairs

#### Uses:

A high performance repair mortar for wet spray application. Suitable for new construction, repairs, and maintenance work. Typical applications include:

- Structural repair material for water and wastewater treatment plants, parking structures, industrial plants, bridges, tunnels and dams, etc.
- Use on vertical and overhead surfaces
- Use on grade, above, and below grade on concrete and mortar
- Potable water tank (NSF approved in Marion, OH and Santa Fe Springs, CA)

#### Key Advantages:

- Potable water approved
- Superior workability. Can be sprayed trowelled, and screeded after application
- Superior abrasion resistance over conventional Portland cement mortar
- High early strengths



### Sikagard®-720 EpoCem® HC

Superfine epoxy-cement sealing mortar

#### Uses:

- As sealing mortar (0.5 – 2.0 mm) on concrete and mortar.
- For repairs to fair faced concrete in chemically aggressive environment
- As pore sealer on horizontal and vertical surfaces
- As temporary moisture barrier

#### Key Advantages:

- Fast and easy to apply
- Excellent adhesion to dry or damp concrete
- An ideal surface preparation for the subsequent application of Sika epoxy products
- Impervious to liquid but permeable to water vapour (allows substrate to "breathe")



**Sikadur®- 752**



Low viscosity epoxy resin injection

**Uses:**

- To fill and seal cavities and crack in structural concrete such as columns, beams, foundations, decks and water retaining structures

**Key Advantages:**

- Tenacious crack-sealing grout
- Super-low viscosity
- Suitable in both, dry and damp conditions
- High mechanical and adhesive strength
- Hard, but not brittle
- No shrinkage



**Sikadur®- 31 CF Normal**



2-part thixotropic epoxy adhesive

**Uses:**

*As a structural adhesive and mortar for:*

- |                          |                           |
|--------------------------|---------------------------|
| ■ Concrete elements      | ■ Hard natural stone      |
| ■ Ceramics, fiber cement | ■ Mortar, bricks, masonry |
| ■ Steel, iron, aluminum  | ■ Wood                    |
| ■ Polyester, epoxy       | ■ Glass                   |

*As a repair mortar and adhesive:*

- Corners and edges
- Vertical and overhead use
- Holes and void filling

*Joint filling and crack sealing:*

- Joint and crack arris / edge repair

**Key Advantages:**

- Easy to mix and apply
- Suitable for dry and damp concrete surfaces
- Very good adhesion to most construction materials
- High strength adhesive
- Thixotropic: non-sag in vertical and overhead applications
- Hardens without shrinkage
- Different colored components (for mixing control)
- No primer needed
- High initial and ultimate mechanical strength
- Good abrasion resistance
- Impermeable to liquid and water vapour
- Good chemical resistance

# CONCRETE PROTECTION AND MORTAR ENHANCER



**Sikagard®-62**



2-part epoxy protective coating

## Uses

- Abrasion-resistant universal coating material designed for normal to moderately aggressive chemical environments
- Suitable for use on concrete, stone, cementitious mortars and renderings, epoxy cements (EpoCem), epoxy mortars and steel
- For linings to storage tanks and silos, bund areas
- Anti-corrosion coating in food processing plants, sewage works, farms and agricultural enterprises, chemical and pharmaceutical plants beverage industries and bottling plants.
- Also used as part of glass fibre-reinforcement self-supporting linings with crack-bridging properties on bund areas and storage tanks

## Key Advantages:

- Total solid
- Good chemical and mechanical resistance
- Easy to mix and work
- High-build
- Impervious to liquids



**Sikagard®-704 S**



Silane / Siloxane based reactive water repellent impregnation

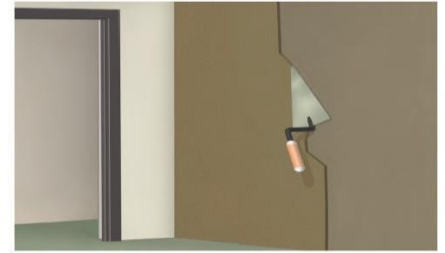
## Uses

Sikagard -704 S is used as water-repellent impregnation (hydrophobic treatment) for absorbent substrates such as concrete in civil engineering or building concrete structures subjected to heavy stress due to chloride attack in marine environment, etc.

- Suitable for protection against ingress (Principle 1, method 1.1 of EN 1504-9),
- Suitable for moisture (Principle 2, method 2.1 of EN 1504-9)
- Suitable for increasing the resistivity (Principle 8, method 8.1 of EN 1504-9)

## Key Advantages:

- Good penetration (close to the threshold of class II of EN 1504-2)
- Economic and easy use
- reduce capillary water absorption, protects against driving rain splashing on vertical areas
- Reduction of absorption of aggressive or deleterious agents dissolved in water (i.e., de-icing salt or chloride from marine environment)
- No significant change in water vapour permeability
- Increases the resistance of concrete to freeze and thaw cycles and de-icing salt
- Resistant to sea water
- Ready to use



**SikaCem Bond**



Bonding Agent

## Uses

Increases the qualities of cement mortars, such as:

- Thin layer patching mortars
- Rendering
- Floor screeds
- Concrete repair mortars
- Abrasion resistant lining
- Tile fixing mortars
- Masonry mortars
- Bonding agent between old and new concrete

## Key Advantages:

SikaCem Bond is simply added to the mixing water to provide the following beneficial properties:

- Excellent adhesion
- Reduced shrinkage
- Greater elasticity
- Excellent water resistance
- Increased abrasion resistance
- Improved chemical resistance
- Non-toxic

Note: SikaCem Bond does not re-emulsify, even in high alkaline conditions.

# CHEMICAL ANCHORING, SKIMCOAT AND TILE ADHESIVE



## Sika® Anchorfix-3001



Solvent-free, thixotropic, two-part, epoxy, resin-based, high performance anchoring adhesive

### Uses:

For the fixing of non-expanding anchors in the following:

#### Structural work:

- Rebar / steel reinforcement anchoring in new and refurbishment works
- Threaded rods
- Bolts and special fastening / fixing systems

#### Metalwork, carpentry:

- Fixing of handrails, balustrades and supports
- Fixing of railings
- Fixing of window and door frames

#### In the following substrates:

- Concrete (cracked and un-cracked)
- Hard natural and reconstituted stone
- Solid rock
- Hollow and solid masonry
- Wood

#### Key Advantages:

- Can be used in damp concrete
- High load capacity
- Drinking Water certified
- Standard guns can be used (with the 250ml cartridge)



## Sika® Brefill



Cementitious skimcoat plaster for interior and exterior surfaces

### Uses:

Sika® Brefill is fast and economical way to level uneven substrates such as concrete, hollow block walls, and others

#### Key Advantages:

Compared to conventional plasters, Sika® Brefill gives you better value-for-money. It has greater durability and flexibility and more importantly, it saves:

- Time. Sika® Brefill is quick drying and easy to apply. It increases productivity by 50%
- Money. Sika® Brefill costs less than conventional plasters and thickness of the plaster can be varied to minimize wastage and cut down cost
- Non-combustible and non-cracking
- Good adhesion
- Easy to mix - just add water



## Sika® Ceram-100P



Pre-packed cementitious tile adhesive

### Uses:

For household application of tiles in horizontal and vertical surface

#### Key Advantages:

- Factory mixed - consistent quality
- Consistent quality ensured under Sika's ISO 9001 and 14001 accredited systems
- Easy to use - just add water
- Tiles can be adjusted up to 20 minutes after application
- Environmentally friendly

# SIKA® FULL RANGE SOLUTIONS FOR CONSTRUCTION & INDUSTRY

**Concrete**



**Refurbishment**



**Sealing & Bonding**



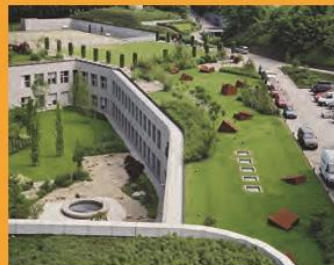
**Waterproofing**



**Flooring**



**Roofing**



**Industry**



**FFI**



## 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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