



# SIKA<sup>®</sup> BUILDING CAPABILITIES SYSTEMS AND SOLUTIONS

BUILDING TRUST







# SUSTAINABILITY

Global Commitment: More Value Less Impact  
6 Targets with largest effect



US Commitment:  
Solutions Built for Sustainability

Similar to our parent company Sika in the US has a strong commitment to sustainability. Our commitment is built on 4 pillars which our business partners have confirmed are critical areas of concern:

-  **Energy Efficiency**
-  **Environmentally Preferable Products**
-  **Greenhouse Gas Reduction**
-  **Waste Reduction**

The products we supply have a positive impact on these 4 pillars. Concrete repair is sustainability. The greenest structures are the ones already built. Extending the life of a building is far more sustainable than building new.



**MORE THAN  
44,000  
BUILDINGS**  
ARE DEMOLISHED EVERY YEAR



## Repairs That Stand The Test of Time

Award winning Sika projects in the International Concrete Repair Institute (ICRI) Awards "Longevity" category



Repaired in 2000  
**JTA Skyway Restoration**



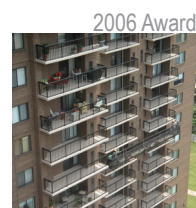
Repaired in 1999  
**Evans Hall at University of CA**



Repaired in 1997  
**Cassell Coliseum at VA Tech Univ.**



Repaired in 1998  
**Rose Bowl Stadium Restoration**



Repaired in 1988-1991  
**Hallmark Condo Balcony Repair**



Repaired in 1988-1990  
**Rehabilitation of Two Hyperbolic Cooling Towers**

# ROOT CAUSES OF DAMAGE



Problems in buildings are usually caused by a combination of factors. It is critical to understand what some of the possible factors are in order to design a proper repair and protection solution. The first and most important step is to diagnose the root cause of the deterioration.

## Common Problems: Building Facades & Balconies



**EYEBROW SPALLS**



**FAILED FACADE COATING**



**POOR CONCRETE COVER**



**SEALANT ADHESION FAILURE**



**FAILED BALCONY COATING**



**RAIL POST DEGRADATION**



**BALCONY SURFACE EROSION**



**UNDERSIDE & BALCONY  
EDGE SPALLS**

## Requirements before the Repair

### Start with the condition Survey

A thorough condition survey is critical to ensure a successful project. This testing should always be conducted by a qualified professional.

Surveys often consist of performing one or more of the following:

- Visual inspection for condition of the concrete, sealants and coatings
- Spall and delamination survey
- Chloride and carbonation testing
- Reinforcement mapping and cover measurements
- Half-cell corrosion potential mapping
- Corrosion rate assessment
- Petrographic analysis

The results of these tests should serve as the basis for selecting a strategy that will meet the project requirements. Sika can help develop a repair and protection strategy and be your single source for a comprehensive solution.



Testing to identify carbonated concrete. Purple indicates a high pH while no color change signifies carbonated concrete

# CONCRETE REPAIR



Sika offers a complete range of high performance repair mortars and prebagged concrete for applications ranging from cosmetic to structural repairs.

Sika's repair mortars are compatible with a full range of restoration systems so that not only the visible signs of damage are repaired, but deterioration is addressed, extending the service life and sustainability of the structure.

## **SikaTop<sup>®</sup>, SikaQuick<sup>®</sup>, SikaGrout<sup>®</sup>, SikaRepair<sup>®</sup>, SikaLevel<sup>®</sup>, Sikacrete<sup>®</sup> AND Sikacem<sup>®</sup>**

- A repair mortar for any concrete repair
- Proven excellence over 30 years of on-site performance
- Polymer modified cementitious mortars
- Repair mortar formulated for overhead, vertical or horizontal use
- Repair materials for wet or dry machine application (shotcrete)
- Unique epoxy/cement reinforcement primer and bonding agent
- Mortars available with integral corrosion inhibitor
- Fast-setting line of mortar and concrete for time sensitive applications
- Pre-packaged concrete mixes, including the revolutionary self-consolidating concrete in a bag.
- Complete line of self leveling underlayments and primers



SikaTop<sup>®</sup> 123 Plus used for vertical repairs.



Sikacrete<sup>®</sup> 211 SCC Plus for form and pour on a balcony.

## **Sikadur<sup>®</sup> STRUCTURAL REPAIR EPOXY RESINS**

- Five decades of proven performance
- A wide selection of high-modulus and low-modulus resin products
- Epoxy products used for structural bonding and crack injection
- Super low viscosity, resins for topical slab treatment against chlorides and water penetration
- Epoxy mortar systems for critical applications in building structures



Sikadur<sup>®</sup> 21 Lo-Mod with oven dried aggregate for rail post grout.

# TOTAL CORROSION MANAGEMENT

Sika is able to offer a comprehensive package of corrosion management solutions that range from assistance with root cause analysis and monitoring to supply of corrosion inhibitors and cathodic protection.

## Sika® FerroGard® -903

Sika FerroGard-903 is a unique surface applied corrosion inhibitor that penetrates the concrete cover to the reinforcing steel, reducing the corrosion rate and extending the service life of a structure.

- Reduces active corrosion
- Delays the onset of corrosion and reduces corrosion rate
- Proven penetration up to 3 inches (75 mm) in 28 days

## Sika® FerroGard® -908

Sika FerroGard-908 is a dual-functional corrosion inhibitor and penetrating sealer.

- Reduces active corrosion
- Increases resistivity of concrete
- Repels water and chloride ions
- Contains silane sealer and amino alcohol corrosion inhibitor



Spalled concrete at columns accelerated by lack of adequate cover



Application of Sika® FerroGard® 903 to a building (l) and a balcony (r)

## Sika® FerroGard® 650, 670 AND 675

Sika FerroGard embedded galvanic anodes consist of a zinc core surrounded by a specially formulated cementitious mortar. The zinc core corrodes preferentially to the surrounding rebar it is attached to, providing galvanic protection to the reinforcing steel.

### Sika® FerroGard® Anodes

- Corrosion prevention for “ring anodes” adjacent to spall repairs
- Placed at the perimeter of the repair
- Use at the interface of new full-depth slab replacement or partial depth areas
- Highly chloride contaminated concrete



FerroGard® Anodes used to prevent corrosion of rebar near the balcony edge



FerroGard® anodes installed where an existing slab and a new, full-depth slab meet

# BALCONY WATERPROOFING

## Protective Coatings for Balconies and Terraces

Sika Systems Selection Guide

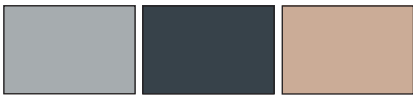
System	Technology	Coats (excluding primer)	Application Days	VOCs	Crack Bridging/ Modulus	Features
Sikalastic® 720/745 Traffic	2-component polyurethane	2-3	1-2	below 10	1/16" dynamic	fast cure, low odor
Sikalastic® 390/391/395	2- component polyurethane	2-3	2-3	below 10	1/16" dynamic	low odor
Sikalastic® 710/715/735 AL	1-component polyurethane	3-4	3-4	below 250	1/16" dynamic	no pot life restrictions, enhanced UV stability with aliphatic top coat
Sikalastic® 710 Lo-VOC /715 Lo-VOC/736 AL Lo-VOC	1-component polyurethane	3-4	3-4	below 100	1/16" dynamic	no pot life restrictions, enhanced UV stability with aliphatic top coat
Sikadur® 22 Lo-Mod Hybrid	polyurethane waterproofing with epoxy wear coat	2-3	2-3	below 100	1/16" dynamic	flexible waterproofing, high abrasion resistance, optional top coat
Sikadur® Epoxy Broadcast Overlay	epoxy and polyurethane	2	2	below 100	low modulus	high abrasion resistance
Sikagard® Flexcoat System	cementitious waterproofing with acrylic top coat	3-4	2	below 100	static	cementitious decorative waterproofing
FlexCoat ATC	cementitious and acrylic	2-4	1-2	below 100	flexible	range of textures, On grade application

Besides roofs, balconies and terraces are the most vulnerable areas of a building because they are permanently exposed to the weather. Effects from heat, frost and rain can cause cracks and leaks in the concrete.

Sika provides comprehensive solutions to waterproofing problems with maximum protection. Sika's wide range of products, including polyurethanes, epoxies and cement based coatings are designed to make concrete and masonry impermeable to water, while offering flexibility to handle all your balcony waterproofing needs.

### Sikalastic® COLORS

3 Standard Colors/ Custom Colors Available



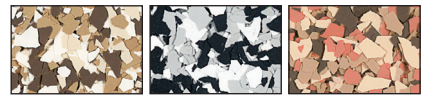
### Sikalastic®/Sikadur® QUARTZ BLENDS

16 Standard Blends Available



### Sikalastic® DECOFLAKE BLENDS

16 Standard Blends Available



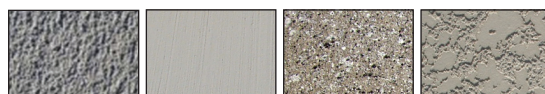
### Sikagard® FLEXCOAT COLORS

12 Standard Colors Available



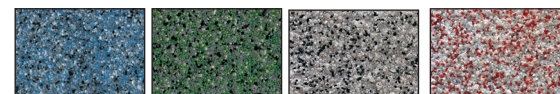
### Sikagard® FLEXCOAT FINISHES

4 Standard Finishes Available



### Sikadur® EPOXY BALCONY SYSTEM

4 Color Quartz Aggregate Finishes Available



**Disclaimer:** The various types of computer monitors and graphics cards on the market all have their own particular characteristics and will all show slight variations in color from one model to another. Therefore Sika cannot guarantee that the colors you see on your monitor correspond exactly to the Sika color range. Actual Sika colors will also show variations from the exact Sika color range when printed on any color printer. Use actual cured product for color matching.



Sikagard® FlexCoat and Sikagard® FlexCoat ATC

### Sikalastic® TRAFFIC SYSTEMS

- Single and two component elastomeric waterproofing traffic systems
- Excellent crack-bridging properties, even at low temperatures
- Excellent resistance to abrasion and wear
- Impervious to water and deicing salts
- Range of standard colors as well as custom and decorative options (see examples on left)

### Sikagard® FLEXCOAT

- Flexible, cement-based waterproofing system
- Base Coat: Cement-based, polymer-modified material
- Water Vapor Permeable System
- Silica-free. No broadcast required for skid resistance
- Acrylic Top Coat: Adds aesthetic value and enhances protection
- Embedding Mesh: can be utilized for crack and joint details



Sikadur® 22 Lo-Mod Balcony System

### Sikadur® EPOXY BALCONY SYSTEM

- Epoxy-based, durable protection system
- Superior resistance to abrasion and wear
- Low modulus resin
- Fast turnaround time
- Impervious to water
- Prevents moisture and chloride intrusion to the concrete, adding years of service life
- Clear resin allows you to pick the aggregate color of your choice



Application of Sikalastic® base coat.



Application of Sikalastic® Seafoam top coat.

# STRUCTURAL STRENGTHENING

## FIBER REINFORCED POLYMERS

Fiber reinforced polymers (FRP) are a proven technology for upgrading and strengthening concrete, masonry, and steel structures. These advanced composite materials have exceptionally high strengths, yet are very lightweight and easy to work with. They are used for increasing the capacity of existing buildings, seismically upgrading structures, correcting design or construction errors, and allowing modifications or changes in use.

- Economical and durable
- Easy application
- Extremely high tensile strength
- Outstanding fatigue behavior
- Absolute corrosion resistance
- Ability to upgrade structure while in use
- Upgrades possible even with limited access



Examples of blast strengthening using Sika® CarboDur® plates and SikaWrap® fabrics

## Sika CarboDur® and SikaWrap® SYSTEMS

Sika CarboDur plates and SikaWrap fabrics have been used successfully on thousands of projects worldwide. The most common uses have been for flexural strengthening, shear upgrades and column confinement. However, they have many other uses, including strengthening for cut-outs, blast hardening, fire and structural damage, and upgrading structures damaged by corrosion.



SikaWrap® System used to reinforce a concrete beam.



Glass fiber fabric being applied to strengthen unreinforced masonry wall.



Seismic strengthening of columns with carbon fiber fabrics.



# JOINT SEALING

Sikaflex®, Sikasil® and SikaHyflex® High Performance Sealants

## JOINT SEALING

Tight joints are the key to durable and energy-saving building façades. Elastic joint sealants must be able to withstand the thermal movement from various materials and are primarily responsible for air and water tightness of the façade. This is important because water and air tightness are necessary for the thermal insulation of a building and therefore result in a lower energy consumption of the building.

Sika offers Sikaflex polyurethane sealants, Sikasil silicone sealants and SikaHyflex hybrid sealants as a complete range of one-component and two-component sealants for overhead, vertical and horizontal joint applications, such as expansion joints, window and door perimeters, penetrations and roofing.

### Sikaflex®

- Excellent adhesion to most building surfaces without a primer, especially concrete and masonry
- Paintable with most coatings and paints with out risk of delamination
- Non staining, will not discolor common substrates

### Sikasil®

- Excellent adhesion to both porous and non-porous substrates
- Non-staining
- SWRI validated
- Superior durability and weathering resistance

### SikaHyflex®

- Perfect for connecting dissimilar substrates
- Fast overpaintability
- Superior UV resistance



	Sikaflex 1a	Sikaflex 15LM	Sikaflex 2c NS EZ Mix	Sikaflex* 11FC	Sikasil WS-290	Sikasil WS-295	Sika Silbridge-300	Sikasil* N-Plus	SikaHyflex 150 LM
<b>Movement Capability</b>	+35/-35	+100/-50	+50/-50	+12.5/-12.5	+100/-50	+50/-50	+200/-50	+25/-25	+50/-50
<b>Meets ASTM C920</b>	■	■	■	■	■	■		■	■
<b>SWRI Validation</b>	■	■	■		■	■			
<b>Paintable</b>	■	■	■	■					■
<b>Conventional Glazing</b>					■	■		■	■
<b>Structural Glazing</b>									
<b>Expansion Joints</b>	<b>Precast Concrete</b>	■	■	■	■	■	■		■
	<b>Brickwork &amp; Masonry</b>	■	■	■		■	■		■
	<b>EIFS &amp; Stucco</b>		■	■		■	■		■
	<b>Cast-In-Place Concrete</b>	■	■	■		■	■		■
	<b>Horizontal Concrete Pavement</b>	■		■					■
	<b>Tilt-Up Walls</b>		■	■		■	■		■
<b>Window and Door Perimeters</b>	■	■	■		■	■	■	■	
<b>Coping Joints</b>	■	■	■		■	■	■		■
<b>Reglet Joints</b>	■	■	■		■	■			■
<b>General Adhesive</b>	■			■		■		■	

\*Product adheres to concrete and masonry surfaces but is not recommended for expansion joints

# CONCRETE PROTECTION

## Sikagard® Protective Coatings and Sealers

Long term protection of a reinforced concrete building façade cannot be achieved by repairing concrete deterioration alone. The use of a Sikagard protective coating system on a building façade will protect against reinforcing steel corrosion while still allowing the building to breathe with the transmission of water vapor through the protective coating.

### SEALERS

- High reduction of aggressive element ingress
- High penetration for long term durability
- Non staining
- Increased resistance to freeze/thaw cycles and de-icing salts

### SIKAGARD FACADE COATINGS PROVIDE:

- Water based, acrylic, VOC compliant coatings
- Dynamic and thermal crack bridging capabilities
- Excellent resistance to dirt pick-up and mildew
- Proven durability results over 15 years in service



## Sikagard Protective Treatments

Property	Protective Coatings			Protective Sealers			
	Sikagard® 570	Sikagard® 550W Elastocolor	Sikagard® 670W	Sikagard® 706 Thixo	Sikagard® 705L	Sikagard® 740W	Sikagard® 701W
Product Name	Sikagard® 570	Sikagard® 550W Elastocolor	Sikagard® 670W	Sikagard® 706 Thixo	Sikagard® 705L	Sikagard® 740W	Sikagard® 701W
Base	Water	Water	Water	Silane/Water	Silane	Silane/Water	Siloxane
Chloride Resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Carbonation Resistance	Superior	Excellent (tested after 10 years exposure)	Excellent (tested after 10 years exposure)	Excellent	Excellent	Great	None
Crack-Bridging Capacity	Superior (tested down to 0°C)	Excellent (tested down to 0°C)	Will accept normal hygrothermal movement	None	None	None	None
Long-Term Weathering	Superior	Superior	Excellent	Great	Great	Moderate	Moderate
Resistance to Wind-Driven Rain	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Breathability	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Aesthetics	Pigmented	Pigmented	Pigmented	No Change	No Change	No Change	No Change
Color	463 Standard colors, color matching available	463 Standard colors, color matching available	463 standard colors color matching available	None	None	None	None

# ROOF WATERPROOFING

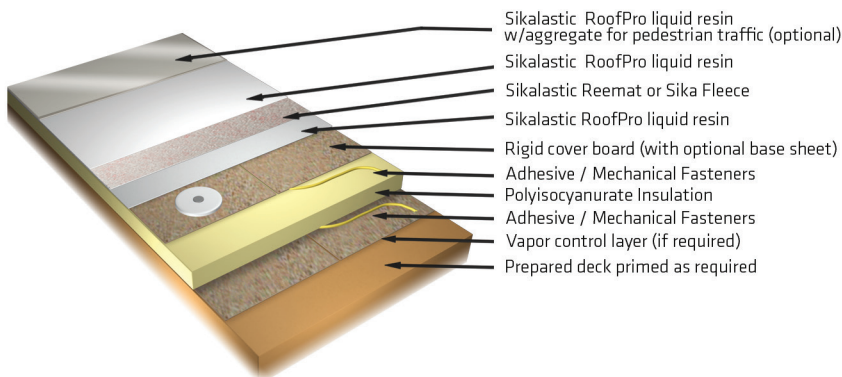
Sikalastic RoofPro cold, liquid-applied membranes combine a moisture-triggered saturating resin with either fiberglass strand Reemat or non-woven polyester fleece reinforcement, resulting in a highly durable, seamless, fully reinforced, fully bonded, waterproof elastomeric membrane. The superior reliability of Sikalastic RoofPro membranes has been proven over 25 years of successful applications worldwide.

Sikalastic RoofPro membranes bond directly to most common building substrates, are resistant to typical rooftop contaminants, and are rainproof minutes after application. The liquid-applied nature of the membrane means that even the most complex penetrations and decorative elements can be waterproofed without the use of metal flashings, sealants, pitch pans or mastics.

Sikalastic RoofPro systems are excellent solutions for a wide range of roofing, waterproofing, restoration and repair applications, from problem-solving repairs to aesthetic applications using colors, aggregate or flake surfacing to complement or accent the structures to which it is applied.

System	Roofing	Waterproofing	Restoration	Repair
Sikalastic® 601/621	- Built-Up Insulated Roofing - Direct- to- Substrate Roofing - Protected Membrane Roofing - Recover Roofing	- Also Acceptable if Alkalinity Resistance is Not Required	- Decorative Elements - Metal Recover Roofing	- Existing Flashing - Unique Conditions
Sikalastic® 641 Low-Odor	- Built-Up Insulated Roofing - Direct- to- Substrate Roofing - Protected Membrane Roofing - Recover Roofing	- Also Acceptable if Alkalinity Resistance is Not Required	- Decorative Elements - Metal Recover Roofing	- Existing Flashing - Unique Conditions
Sikalastic® 624 WP	- Also Acceptable	- Plaza Deck Waterproofing - Balcony/Terrace Waterproofing - Vegetated Roofing - Alkali Resistant	- Also Acceptable	- Also Acceptable
Sikalastic® 644 Low-Odor	- Also Acceptable	- Plaza Deck Waterproofing - Balcony/Terrace Waterproofing - Vegetated Roofing	- Also Acceptable	- Also Acceptable

## Sikalastic® RoofPro® BUILT-UP INSULATED



Sikalastic® RoofPro easily installs over insulation and cover board in a full system application, providing fire, hail and wind uplift resistance typically required by codes and specifications.

# SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:



**WATERPROOFING**



**CONCRETE**



**REFURBISHMENT**



**SEALING AND BONDING**



**FLOORING**



**ROOFING**

## FOR MORE INFORMATION:



All sales of Sika products are subject to Sika's current Terms and Conditions of Sale available at [www.usa.sika.com](http://www.usa.sika.com) or by calling 201-933-8800. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet, which are available at [www.usa.sika.com](http://www.usa.sika.com) or by calling Technical Services at 1-800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instructions for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.

The sale of all Sika products are subject to the following Limited Warranty:

### LIMITED MATERIAL WARRANTY

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

**NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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



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