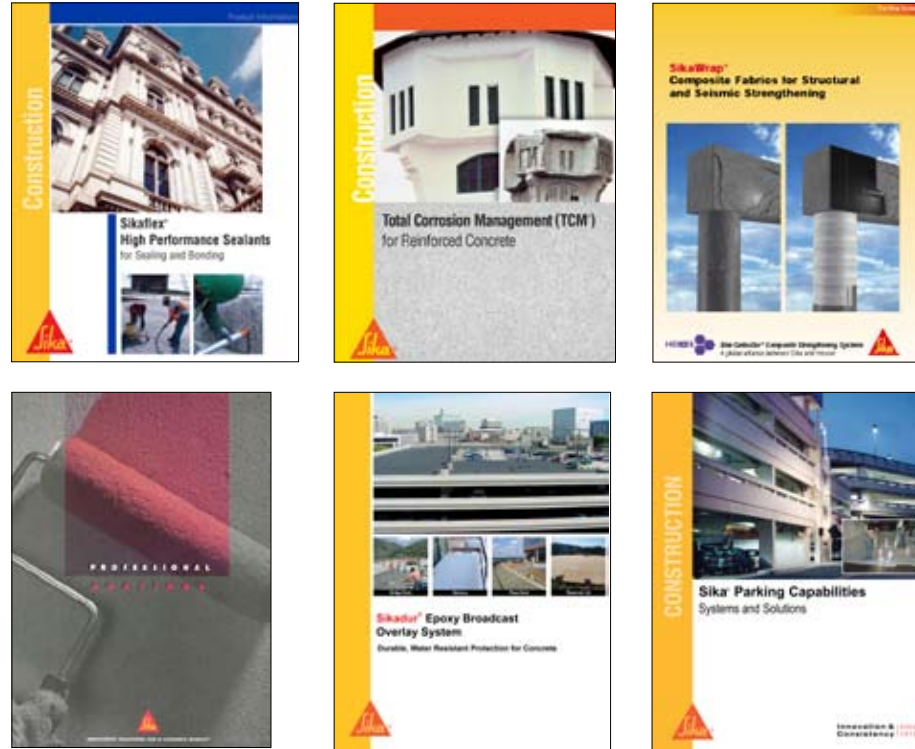


Sika® Building Capabilities

Repair, Restoration, and Protection

Also available



All sales of Sika products are subject to Sika's current Terms and Conditions of Sale available at www.sikacorp.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 Technical Data Sheet, product label and Material Safety Data Sheet, which are available at www.sikaconstruction.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 Technical Data Sheet, product label and Material 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 Technical 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.

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

Contact Sika at:
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CONSTRUCTION



Sika® Building Capabilities Systems and Solutions

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Innovation & Consistency | since 1910

Sustainability

Sustainability in the construction industry is a new way of thinking about how to produce materials and maintain buildings with minimal effect on the environment. For over 100 years, Sika has been at the forefront of concrete repair and protection technology, helping to create and maintain sustainable structures as well as keeping landfills clear and protecting the environment.

Today, Sika continues to be a global leader in “green” building technology and actively participates in the industry with a focus on creating and maintaining sustainable buildings for the next century.

- All Sika’s manufacturing facilities are compliant with the ISO 9001/9002 Quality, 14001 Environmental Assurance Systems.
- Sika Corporation applies procedures and production processes in accordance with Responsible Care RC 14000 Management Systems.
- Sika is a member of the U.S. Green Building Council. Sika products can be used to earn points toward LEED® certification.
- Our focus is on the development of products that are renewable and sustainable and aid in meeting environmental goals

Sustainability is Concrete Repair

Sustainability and concrete repair go hand in hand. Industry experts agree that the carbon foot print of repairing and extending the service life of existing concrete structures is exponentially less than building new concrete structures. Concrete repairs completed in accordance with industry guidelines result in proven durability. Technology available today for engineered repair solutions enables designers to meet the ever changing needs of the world.

Sika Corporation offers systems and solutions that ensure sustainable repairs and maximum protection by offering products and services that are the benchmark of quality, reliability and durability in the industry. In short, sustainability taken to a different level - unmatched by others!

Repairs that Stand the Test of Time

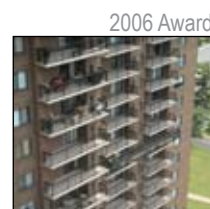
All are project winners in the International Concrete Repair Institute (ICRI) Awards’ “Longevity” category.



2009 Award
Repaired in 1997
Cassell Coliseum at VA Tech Univ.



2008 Award
Repaired in 1998
Rose Bowl Stadium Restoration



2006 Award
Repaired in 1988-1991
Hallmark Condo Balcony Repair



2006 Award
Repaired in 1992
Silver Jubilee Bridge Repair



2005 Award
Repaired in 1995
Baldwin Reservoir



2005 Award
Repaired in 1988-1990
Rehabilitation of Two Hyperbolic Cooling Towers



Identify the Root Cause of the 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.



Building Restoration

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 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 Repair Mortars & Concrete Sikadur® Epoxy Systems



SikaTop®, SikaQuick®, Sika® MonoTop®, SikaRepair® and Sikacrete®

- Proven excellence over 30 years of on-site performance
- One and two-component 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 steel reinforcement primer and bonding agent (Armatec 110)
- Mortars available with corrosion inhibitor (Sika FerroGard) to reduce corrosion
- Fast-setting line of mortar and concrete for tough, demanding turnaround applications
- Pre-packaged concrete mixes, including the revolutionary self-consolidating concrete in a bag.

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

Our repair mortars and concrete systems are compatible with a full range of Sika repair and protection materials 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 123 Plus used for vertical repairs.



Sikacrete 211 SCC Plus for form and pour on a balcony.

Sikadur® Structural Repair Epoxy Resins



Sikadur 21 Lo-Mod with oven dried aggregate for rail post grout.

- Four decades of proven performance
- A range of epoxy products used for structural bonding and injection resins
- Super low viscosity, moisture tolerant, penetrating systems for topical slab protection against chlorides and water penetration
- Epoxy mortar systems for critical applications in building structures

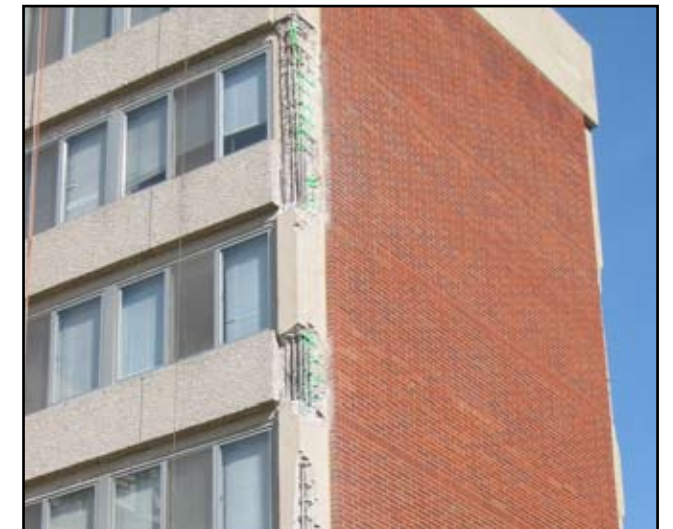
Total Corrosion Management Corrosion Inhibition and Prevention Products and Services for Reinforced Concrete

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®

Sika FerroGard 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
- Significantly delay the onset of corrosion and reduction of corrosion rate
- Proven penetration up to 3 inches (75 mm) in 28 days
- Environmentally friendly
- Easy to apply



Spalled concrete at columns accelerated by lack of adequate cover



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

Sika Galvashield® XP, XP+ and CC

Sika Galvashield are embedded galvanic anodes that 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 Galvashield XP and XP+ 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

Galvashield CC Anodes

- Targeted corrosion control at "hot spots"
- Inserted into drilled holes in sound concrete
- Installed in a grid pattern provides general corrosion protection
- Highly chloride contaminated concrete



XP+ Anodes used to prevent corrosion of rebar near the balcony edge



XP+ anodes installed where an existing slab and a new, full-depth slab meet

Waterproofing

Balcony Waterproofing Systems

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



Sikalastic Quartz Blends (examples of Quartz colors)



Sikalastic Decoflake Blends (examples of Decoflake colors)



Protective Coatings for Balconies Sika Systems Selection Guide

System	Technology	Coats (without primer)	Application Days	VOCs	Crack Bridging	Features
FlexCoat ATC	cementitious and acrylic	2-4	1-2	below 100	flexible	textures, on-grade application
Sikalastic 710/715/735 Traffic	1-component polyurethane	2-3	2-3	below 250	1/16" dynamic	design flexibility
Sikalastic 720/745 Traffic	2-component polyurethane	2-3	1-2	below 100	1/16" dynamic	fast cure, low odor
Sikadur Epoxy	epoxy and polyurethane	2	2	below 100	low modulus	abrasion resistance



Sikagard FlexCoat and Sikagard FlexCoat ATC



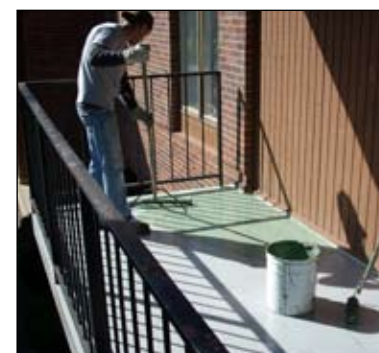
Sikadur 22 Lo-Mod Balcony System

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)



Application of Sikalastic base coat.



Application of Sikalastic Seafoam top coat.

Sikagard® Flex Coat

- 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

Backroll finish



Broom finish



Stipple finish



Knockdown finish



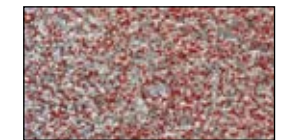
Sikagard Flex Coat Colors



Sikadur® Epoxy Balcony System

- Epoxy-based, durable protection system
- Superior resistance to abrasion and wear
- Low modulus resin
- Fast turnaround time (6 hours)
- 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

Color quartz aggregate color samples



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.

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

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.



CarboDur plates used to reinforce a concrete slab.



Glass fiber fabric being applied to strengthen unreinforced masonry wall.



Seismic strengthening of columns with carbon fiber fabrics.



Examples of blast strengthening using Sika CarboDur plates and SikaWrap fabrics



Joint Sealing

Sikaflex® High Performance Sealants

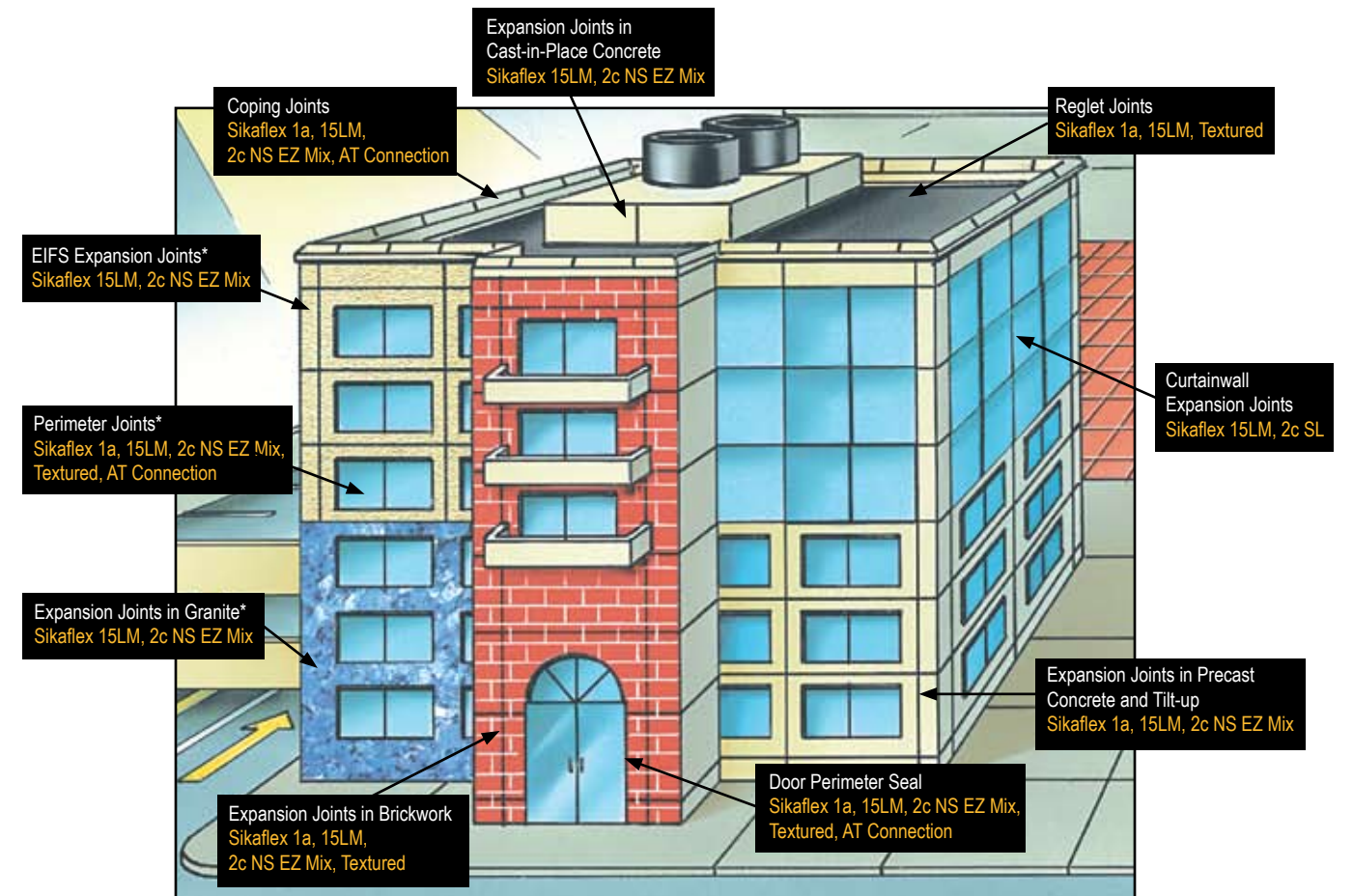
Tight joints are the key to durable and energy-saving building façades. Elastic joint sealants must be able to withstand the thermal movement from various materials and are primarily responsible for air and water tightness of the façade. This is important because water and air tightness are necessary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

Sikaflex sealants are a complete range of one-component and two-component polyurethane sealants for overhead, vertical and horizontal joint applications, such as expansion joints, window and door perimeters, penetrations and roofing. Sikaflex polyurethanes exhibit many characteristics that offer advantages over other sealants in many applications.

- Over 30 year history service performance – retain their elasticity and protective qualities
- Excellent adhesion to most building surfaces, especially concrete and masonry even without a primer
- Paintable with most coatings and paints with out risk of delamination
- Non staining, will not discolor common substrates
- Exhibit less dirt pick up during cure and over lifetime
- Available in a wide range of architectural colors

Specifications

- ▲ ASTM C920
- ▲ Federal Specifications - TT-S-00230C Approvals
- ▲ ANSI/NSF Potable Water Use
- ▲ Meets 1998 USDA - Food Contact Guidelines
- ▲ UL Fire Rating
- ▲ AAMA 808.3-05 Exterior Window Perimeter Sealing Compound
- ▲ VOC Compliant (CARB, SCQAMD)



Common building applications of Sikaflex sealants

Concrete Protection

Sikagard® Facade Coating Systems

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.

Sikagard façade coatings have an exceptional durability record and are specially formulated to reduce carbonation, protect against water, chloride and atmospheric chemical penetration, seal hairline cracks, and protect against cracking caused by dynamic and thermal movement.

Sikagard Facade Coatings provide:

- Excellent carbonation resistance
- High moisture vapor transmission rates
- Dynamic and thermal crack-bridging capabilities down to -10°F (-25°C)
- Proven durability results over 20 years in service periods
- Exceptional UV light resistance and color stability
- Exceptional chalking resistance (retention of protective film thickness)
- Water-based, acrylic, non-toxic and VOC complaint
- Excellent resistance to dirt and mildew

Choose your Sikagard Protective Treatment

	Penetrating Sealers for Chloride and Water Protection	Polymer-based Protective Coatings for Carbonation, Chloride and Water Protection	
NAME	Sikagard 701W	Sikagard 550W Elastocolor	Sikagard 670W
BASE	Water	Water	Water
CHLORIDE RESISTANCE	Excellent	Excellent	Excellent
CARBONATION RESISTANCE	None	Excellent (tested after 10 years exposure)	Excellent (tested after 10 years exposure)
CRACK-BRIDGING CAPACITY	None	Excellent (tested down to 0°C)	Will accept normal hygrothermal movement
LONG-TERM WEATHERING	Moderate	Superior	Excellent
RESISTANCE TO WIND-DRIVEN RAIN	Excellent	Excellent	Excellent
BREATHABILITY	Yes	Yes	Yes
AESTHETICS	No Change	Pigmented	Pigmented
COLOR	Clear	463 standard colors color matching available	463 standard colors color matching available

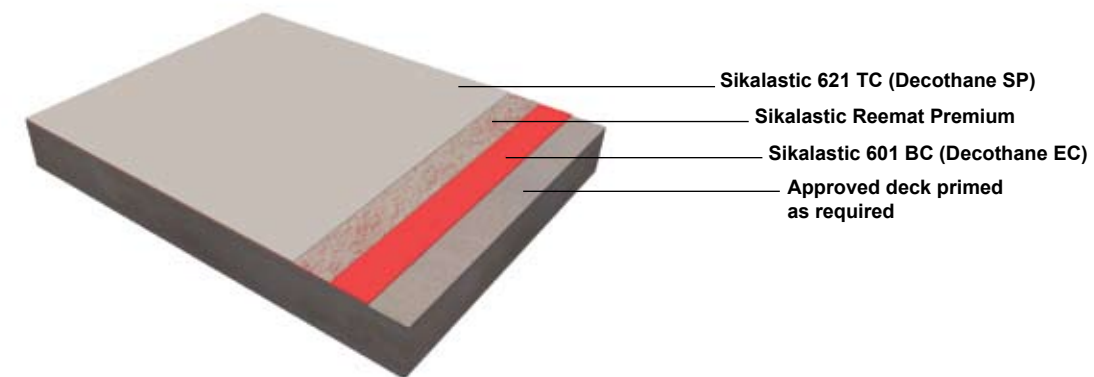


Waterproofing

Roofing and Plaza Waterproofing

Sika offers seamless waterproof membrane technology, built-up roof systems and cold applied, seamless waterproofing for plaza decks and similar applications. This innovative "moisture triggered chemistry" (MTC) polyurethane technology cures to a highly durable, seamless, fully bonded, waterproof, elastomeric membrane.

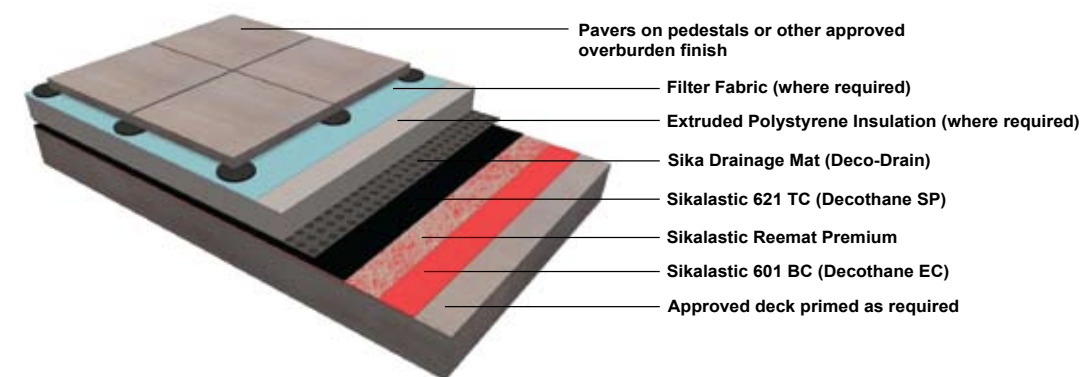
SikaRoof® MTC Membrane



Seamless SikaRoof MTC liquid applied membrane. Note complex transition detail below



SikaRoof® MTC Inverted



Plaza deck waterproofing with SikaRoof MTC Inverted

Features	Benefits
Seamless	No seams or weak spots that commonly result in leaks
Fully bonded	Eliminates lateral water migration
Self-flashing	Does not require pre-assembled flashing
Fully reinforced	Provides added tensile strength to the membrane
Cold applied	No kettles or torches