



**CONTACT US** ABOUT YOUR  
SPECIFIC SLAB DESIGN NEEDS AT  
[SLABSOLUTIONS@US.SIKA.COM](mailto:SLABSOLUTIONS@US.SIKA.COM)

# BUILDING SYSTEMS

## Sika<sup>®</sup> SLAB SOLUTIONS

A COMPREHENSIVE APPROACH TO SLABS ON GROUND

**BUILDING TRUST**



# SIKA SLAB SOLUTIONS

**THE KEY TO A LONG LASTING CONCRETE SLAB** in the most demanding conditions is proper slab design and utilizing high quality products. Through the best practice guidelines of ACI combined with Sika®'s more than 100 years of global expertise in concrete solutions, Sika® is able to provide a suite of products to create a more durable, crack resistant and cost effective slab for your next construction project.

Value for owners, contractors and producers alike, Slab Solutions by Sika® addresses all phases of construction, from preparation, to pour, to production, Sika® is able to create value for construction of large and small facilities. Site safety is maximized with removal of traditional reinforcement and minimization of saw cut joints. Cost savings is realized through the correct selection of products and design optimization.

Until this point, the design community has been left to handle concrete slab designs on their own. Provided with all necessary information, Sika® is able to assist your design team in creating concrete with reduced water/cement ratio, optimized placement characteristics, low shrinkage, increased structural loading capacity and reduced curling. The result is a building code

accepted design, standard details and general notes tailored and optimized to each design, resulting in construction cost and schedule savings/improvements.

On site, support continues with Sika®'s experienced field representatives assisting local producers with mix design suggestions to ensure the highest possible level of performance. With experts in the fields of waterproofing, sealants, repair, flooring and roofing, Sika® is your single-source provider for all of your product needs. From pre-pour preparation to final finished flooring, your next large slab is in the hands of the market leader for innovation, service and value.



## TYPICAL APPLICATIONS:

- Warehousing
- Distribution Centers
- Manufacturing Facilities
- Commercial and Retail Space
- Food & Beverage Facilities
- Educational Facilities
- Hospitals
- Data Centers



## FEATURES AND BENEFITS:

- Extended Joint Spacing
- Partial or Full Replacement of Reinforcing
- Reduced Construction Costs and Schedule
- Reduced Maintenance Costs
- Increased Service Life
- Enhanced Surface Quality and Durability
- Design Assistance and Support
- Single Source Supplier

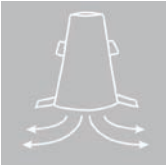
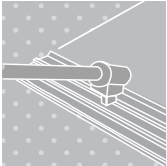


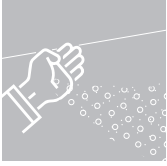


## PRODUCT FAMILIES

- ViscoCrete® Series of Water Reducing Admixtures
- Sika® Control Series - Shrinkage Reducing/Compensating Admixtures
- SikaFiber® Force Macro Synthetic Concrete Fibers
- Sika® Dry Shake Hardeners
- Sika® Solutions for Concrete Curing
- Sika® Solutions for Concrete Joints
- Sika® Flooring Systems
- Sika® Roofing Systems

# CONCRETE COMPONENTS

Concrete design begins with the proper proportioning of cement, water and aggregate. Design of concrete, however, is optimized for value, workability and performance with the addition of chemical and mineral admixtures. The foundation of Sika® was built in 1910 with its first concrete admixture, it is no surprise that Sika® is also the world's largest and most trusted concrete products manufacturer. Below are some of the products available to enhance concrete placement, performance, and durability.

	<p><b>SIKA® VISCOCRETE® SERIES - WATER REDUCERS</b></p> <p>The use of a water reducing admixture provides a way to increase overall strength, lower permeability, allow for easier placement and to control slump life for optimal surface finishing.</p>	<ul style="list-style-type: none"> <li>■ Increase Overall Strength</li> <li>■ Lower Permeability</li> <li>■ Ease of Placement</li> </ul>
	<p><b>SIKA® VISCOFLOW® SERIES - WORKABILITY ENHANCERS</b></p> <p>Sika® provides the newest admixture technologies to extend slump life and enable optimized pumping. Sika® ViscoFlow® technology extends slump life without retardation. For concrete pumping, the use of a viscosity modifier increases mix stability and segregation resistance resulting in better flow and improved surface quality/aesthetics.</p>	<ul style="list-style-type: none"> <li>■ Increase Slump Life</li> <li>■ Extended Working Time</li> <li>■ Improve Surface Quality</li> <li>■ Decrease Segregation</li> </ul>
	<p><b>SIKA® CONTROL SERIES - SHRINKAGE REDUCERS</b></p> <p>The use of a shrinkage reducing admixture (SRA) or shrinkage reducing and compensating admixture (SRCA) helps to control early age shrinkage cracking in concrete. By reducing incidence of cracking from the moment of placement onward increases the life span and reduces repair costs.</p>	<ul style="list-style-type: none"> <li>■ Reduced Shrinkage Cracking</li> <li>■ Increase Life Span</li> <li>■ Lower Repair Costs</li> </ul>
	<p><b>SIKAFIBER® FORCE - FIBER REINFORCEMENT</b></p> <p>Macro Synthetic Concrete Fibers can replace some or all traditional reinforcing steel. ACI design standards allows for the use of microfiber reinforcement to partially/fully replace conventional slab reinforcement such as welded wire fabric or rebar. The use of structural fibers creates a 3D matrix of protection within the entire cross section of the concrete. If cracking is to occur, the fiber engages and provides crack containment.</p>	<ul style="list-style-type: none"> <li>■ Replace Reinforcement</li> <li>■ Accelerate Construction</li> <li>■ Increase Tensile Capacity</li> </ul>
	<p><b>SIKA® LITHOCHROME® - DRY SHAKE SURFACE HARDENER</b></p> <p>Dry shake concrete hardeners are used during concrete finishing to increase surface density. In doing so, a hard, long-wearing, abrasion-resistant surface is created.</p>	<ul style="list-style-type: none"> <li>■ Densify Surface</li> <li>■ Increase Abrasion Resistance</li> <li>■ Extend Service Life</li> </ul>

# LOAD TRANSFER SYSTEMS FOR CONCRETE JOINTING

The movement of material handling equipment, such as forklifts and other vehicular traffic, over the top of concrete slab joints requires precautions to avoid slab deflection and subsequent cracking. Without a mechanism to transfer loads between the two or more slab sections, they will move independently of one another, causing joint fatigue and deterioration. This deterioration will lead to the need for nosing repair and sealing replacement; increasing joint maintenance cost over time. Traditional doweling practices are time and labor intensive to use, so Sika has created a series of solutions to address this.

	<p><b>SPEED DOWEL®</b> Speed Dowel® provides a practical dowel alignment method for transferring loads across, and managing stresses within, concrete slab-on-ground joints.</p>	<ul style="list-style-type: none"> <li>■ Used for Construction Joints</li> <li>■ Ensures proper dowel alignment for positive load transfer</li> <li>■ Reduces time and cost for conventional slip dowel installation</li> <li>■ Eliminates need to grease dowels</li> </ul>
	<p><b>SPEED PLATES®</b> Speed Plate® provides load transfer across construction joints and immediately accommodates lateral and axial movement produced by concrete shrinkage and differential slab movement.</p>	<ul style="list-style-type: none"> <li>■ Used for Construction Joints</li> <li>■ Ensures proper plate alignment for positive load transfer</li> <li>■ Allows for axial and lateral slab movement</li> <li>■ Eliminates need to grease dowel</li> </ul>
	<p><b>DOUBLE TAPERED BASKET®</b> Dowel tapered basket design accommodates axial and lateral slab movements more rapidly than other tapered plate basket system. It is a method in accordance with ACI 360 Design of Slabs-on-Ground.</p>	<ul style="list-style-type: none"> <li>■ Used for Saw Cut Joints</li> <li>■ Allows for axial and lateral movement</li> <li>■ Double tapered design provides consistent and increased bearing area across every plate dowel</li> </ul>
	<p><b>ZIPCAP® 2-PIECE CONTROL - JOINTS FORMER</b> ZipCap® Control Joint is a fast, easy method of providing a weakened plane in flat concrete surfaces. The plane of weakness created by Zip Cap anticipates cracking forces and reduces undesired random cracks.</p>	<ul style="list-style-type: none"> <li>■ Used for Control Joints</li> <li>■ Creates a control joint with excellent aggregate interlock</li> <li>■ Installs easily in fresh concrete</li> </ul>
	<p><b>SPEED LOAD®</b> Speed Load® is a single component dowel sleeve for use in expansion joints. Speed Load passes through pre-drilled expansion boards and has a self-locking design to securely position and align round dowels for positive load transfer.</p>	<ul style="list-style-type: none"> <li>■ Used for Expansion Joints</li> <li>■ Dowel sleeve passes through expansion board</li> <li>■ Allows contractor to pour against and through expansion joints</li> <li>■ Eliminates need to grease dowels</li> </ul>
	<p><b>EMSEAL® EXPANSION JOINTS &amp; PRECOMPRESSED SEALANTS</b> Sika® EMSEAL® products are designed and manufactured to meet the demands of both the remediation of existing buildings and the maintenance of new structures. EMSEAL® products address the application demands of modern construction.</p>	<ul style="list-style-type: none"> <li>■ Used for Expansion Joints</li> <li>■ Solutions for horizontal and vertical joints</li> <li>■ Watertight, fire rated, insulating and seismic options for all parts of your project</li> </ul>

# CONCRETE CURING

Regardless of your project application, all concrete must be cured for optimal surface durability and performance. ACI Chapter 318 Guidelines emphasizes the importance of wet curing over a 7 day period - illustrating that the compressive strength can be increased by more than 50% over curing in air alone.

Traditional methods such as misting, ponding and using materials such as burlap or plastic can yield positive results, but are time and labor intensive to use and maintain. Burlap will maintain moisture in a slab only if it is continually moistened-requiring time and labor. Plastic will maintain most of the concrete moisture, but must be secured and can visibly mar the concrete surface.

Sika®'s finishing aid/curing film and curing blankets, will lower your labor costs and increase your slabs durability and aesthetics. By reducing drying shrinkage, curling and cracking potential you can get off the job faster and receive less call-backs.



## SIKAFILM®

SikaFilm® retards moisture evaporation from the concrete surface and acts as a finishing aid for concrete flatwork. SikaFilm® is recommended for use in all applications where a superior finish is required on concrete flatwork. SikaFilm® protects concrete from the effects of excessive moisture loss in rapid drying conditions.

- Reduces moisture loss and rapid drying from concrete surface
- Aids in finishing concrete that produces little or no bleed water, such as microsilica mixes or mixes with air entrainment
- Simple installation with spray on application



## SIKA® ULTRACURE®

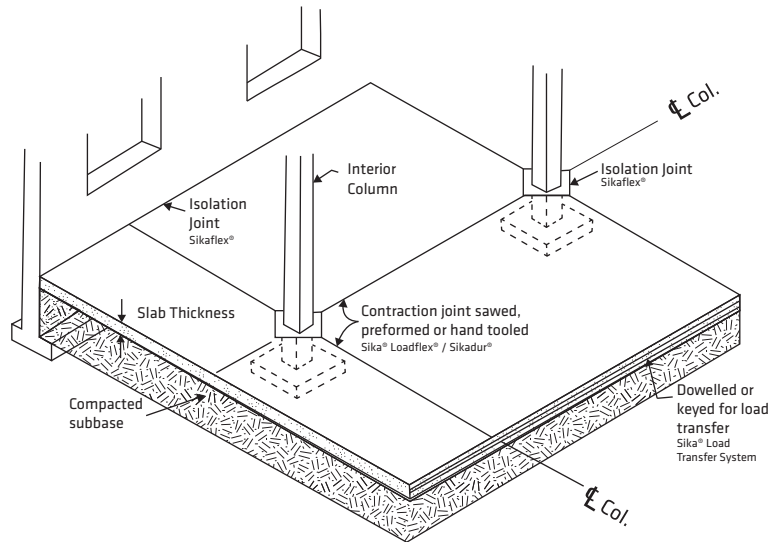
Sika® UltraCure® is a heavy duty concrete curing blanket that features a polyethylene vapor barrier applied to one side to help minimize concrete overheating, maintain moisture levels, and provide protection against UV degradation.

- Retains 100% relative humidity on the surface after a single wetting, for 7 days
- Absorbs and distributes water evenly over the entire slab surface
- Helps protect slabs and other flooring
- Simple installation: rolls out where needed
- Helps prevent surface scratches, contaminants, and potential impact hazards reinforcement

# SEALANTS FOR CONCRETE JOINT PROTECTION

Concrete expands and contracts with drying shrinkage and temperature changes. To control where this cracking occurs, joints are placed into the concrete slab at a predetermined spacing. These joints can be saw cut (control) or preformed (isolation / expansion), allowing for these natural changes in the concrete throughout varying ambient conditions.

While concrete joints offer protection from uncontrolled cracking, they need protection themselves. Heavy forklift traffic can quickly damage joint edges causing them to widen and become unsafe. To prevent joint damage, joints are filled with either an epoxy or polyurea control joint filler and shaved smooth to create a flush profile for forklift traffic. Expansion joints in floors should still be able to withstand heavy traffic but have the flexibility for greater joint movement.



Source: ACI 360R-10 Guide to Design of Slabs-on-Ground



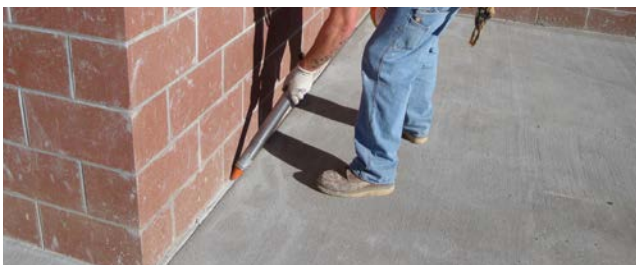
## Sikadur®-58 CJR

- Used for control joints with vehicle traffic
- Can be placed with bulk gun and pump
- Thicker body will not run out after placed in joint, allowing for a nice ridge and less staining
- No grit filler
- Easy to shave compared to typical epoxies
- Low odor
- High moisture tolerance prevents bubbling and foaming at joint line



## Sika® Loadflex®-524 EZ

- Used for control joints with vehicle traffic
- Shaves smooth in as little as 15 minutes allowing spaces to open to foot and forklift traffic sooner
- Extended Shave time window affords contractors the ability to come back the next day and shave
- Better UV Resistance compared to typical polyureas
- High moisture tolerance prevents bubbling and foaming at joint line



## Sikaflex® 1c SL

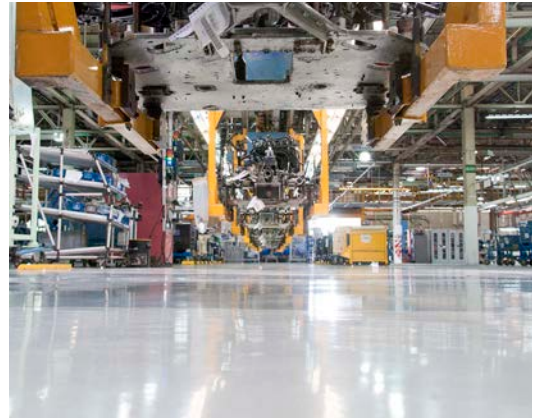
- Used for isolated joints with no traffic
- 1- Component, No Mixing Required
- Self-Leveling, pourable
- Can be applied to Damp Concrete 1 hour after getting wet
- Can be applied to green concrete 24 hours after pour
- Accelerated Curing

# FULL SERVICE SOLUTIONS

Additional Building Systems Offered by Sika®

For more than 100 years, architects, construction companies and manufacturers have trusted Sika® products to seal, bond, damp, reinforce and protect the things they design and build. Beyond simply providing specialty products, Sika® is a true partner, bringing its deep application and technical expertise to projects, while addressing customer needs for better, smarter and more sustainable solutions.

Sika®'s business is aligned in seven target markets: concrete, waterproofing, roofing, flooring, sealing & bonding, refurbishment and industry. Research & development units are established for all target markets. The fully integrated concepts offered by Sika® address the entire life cycle of a facility, from initial construction up to the point in time when repair, refurbishment or extension become necessary. For more information, please reach out to your local representative.



## SIKA® SARNAFIL® PVC ROOFING

Sika® Sarnafil®'s systems, products and services are designed to precisely fit your needs. With more than 50 years of roofing and waterproofing experience, on buildings of all types and many diverse climates, Sika® Sarnafil® is a leader in thermoplastic membrane technology.

- High Performance Roofing Systems
- Energy Smart Roofing Systems
- Strategic Account Management for Facility Owners
- Roof Recycling for your Existing System



## SIKA® FLOORING

Sika® is a world renowned market leader in cement, epoxy and polyurethane flooring systems that have been proven in both new construction and refurbishment projects in commercial and industrial construction. The Sika® Secure System plays a critical role in the final appearance and service life of your installed floor.

- Resinous Flooring For All Applications
- Electrostatic Discharge Applications
- High-End Design For Retail And Other Aesthetic Applications
- Heavy Industrial Flooring For Heavy-Duty Applications



## RMAX®, A SIKA® COMPANY

Properly insulated walls and roofs are an essential piece in the reduction of energy usage and reduced air infiltration into a structure. Through the use of continuous, polyiso insulation and taped seams, it is possible to achieve these goals easier and more efficiently, which allows you to enjoy cost savings throughout the life of your structure.

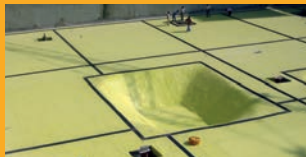
- Walls
- Roofs
- Specialty Applications

ADDITIONAL RESOURCES AVAILABLE AT [WWW.USA.SIKA.COM/SLABSOLUTIONS](http://WWW.USA.SIKA.COM/SLABSOLUTIONS):

- Contact Information for Design Support
  - Lunch and Learn Requests
  - Design Details
  - Suggested Specifications
  - Additional Information on these products and more
- CONTACT US AT [SLABSOLUTIONS@US.SIKA.COM](mailto:SLABSOLUTIONS@US.SIKA.COM)



# SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:



**WATERPROOFING**



**CONCRETE**



**REFURBISHMENT**



**SEALING AND BONDING**



**FLOORING**



**ROOFING**

All sales of Sika products are subject to Sika's current Terms and Conditions of Sale available at [usa.sika.com](http://usa.sika.com) or by calling 800-933-7452. 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 [usa.sika.com](http://usa.sika.com) or by calling Technical Services at 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.**

Contact Sika:

Phone: 1-800-933-7452

Website: [usa.sika.com](http://usa.sika.com)

Our most current General Sales Conditions shall apply.

Please consult the Product Data Sheets prior to any use and processing.

## **Sika Corporation**

201 Polito Avenue

Lyndhurst, NJ 07071

Phone: 201-933-8800

Fax: 201-933-6225