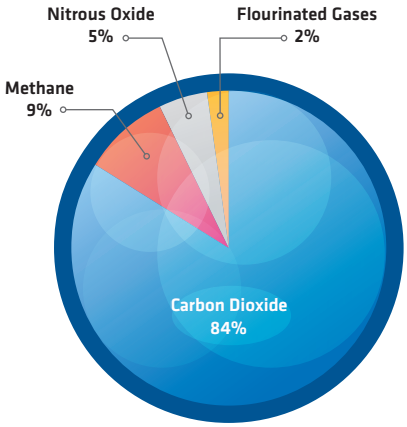
Solutions Built for Sustainability

Refurbishment | Roofing | Sealing & Bonding | Façades, Fenestration & Insulated Glass | Flooring | Waterproofing | Concrete | Building Envelope

BUILDING TRUST



Source: EPA Website Inventory of U.S. Greenhouse Gas Emissions 1990-2011 (April 2013)

The most significant percentage of Greenhouse Gas Emissions is Carbon Dioxide which is mainly created from burning fossil fuels. Producing materials in a more efficient way. Increasing the lifespan of our infrastructure with more durable products. Helping buildings remain more energy efficient. These are several ways that Sika contributes to reducing Greenhouse Gas Emissions.

Proven Performance is a reflection of Sustainability.

Performance is the foundation of sustainability. Our products take less from the environment and offers more in durability and longevity, which results in a smaller environmental footprint overall. Working to create industry leading innovations that extend our product life cycle – from our concrete and flooring products, to our sealants and roofing systems used on buildings and parking garages, bridges and stadiums as well as dams and water treatment facilities – Sika seeks to truly make a difference in meeting the sustainable challenges our industry and planet face today and tomorrow.

Sika's four Pillars of Sustainability

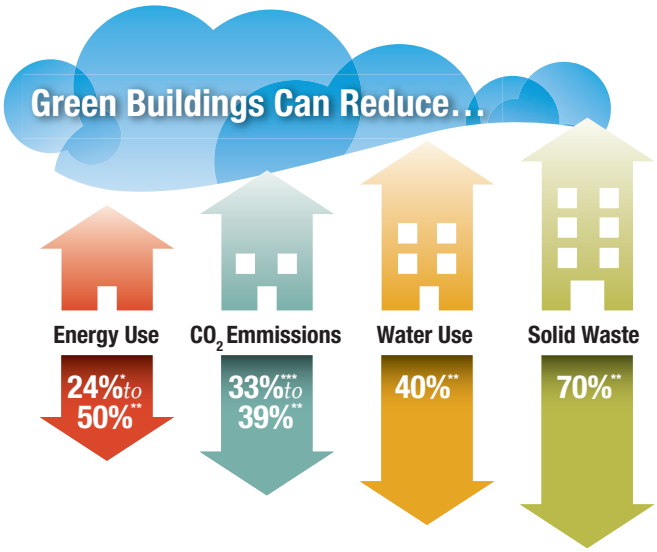
Feedback from our business partners tells us these are the four critical areas of Sustainability key to each product market.

Sika's sustainability efforts span many different product-markets including Refurbishment, Roofing, Sealing & Bonding, Concrete, Waterproofing, Façades, Fenestration & Insulated Glass and Flooring.

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

How long a product performs is only part of the sustainability story. Product formulation, production and how a company reacts to industry change are also important aspects of providing Sustainable solutions. As a global leader, Sika actively participates in industry innovations to build a better sustainable infrastructure for now and long into the future.

- Many Sika Corporation manufacturing facilities are compliant with the ISO 9001 Quality and the ISO 14001 Environmental Management Systems.
- Sika Corporation applies procedures and production processes in accordance with Responsible Care RC 14000 Management Systems.
- Sika Corporation is a member of the U.S. Green Building Council. Sika products can be used to earn points towards LEED® certification.



* Turner, C. & Frankel, M. (2008). Energy performance of LEED for New Construction buildings: Final report.
** Kats, G. (2003). The Costs and Financial Benefits of Green Building: A Report to California's Sustainable Building Task Force.
*** GSA Public Buildings Service (2008). Assessing green building performance: A post occupancy evaluation of 12 GSA buildings.

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ACHIEVE YOUR GREEN BUILDING CERTIFICATIONS

Energy Efficiency

Sika has long promoted a full system repair and protection approach. This holistic approach restores and preserves the integrity of the building, prevents both air and water leakage and improves overall efficiency and performance for many years to come.

Environmentally Preferable Products

Products that comply with the most stringent industry requirements and are locally and readily available are important, but that is only part of the story. Our products are designed and tested to work together as a system resulting in performance that lasts.

Greenhouse Gas Reduction

Reducing fossil fuel consumption reduces greenhouse gas emissions. Fixing the deficiencies of existing buildings results in more efficient heating and cooling. Preserving a structure eliminates the need to build new and reduces the demand for new construction materials.

Waste Reduction

Every year more than 170,000 commercial buildings are built and over 44,000 are demolished. Repairing rather than building new reduces both energy consumption and landfill requirements resulting in the most sustainable solution.

The greenest structures are the ones already built.

MORE THAN 44,000 BUILDINGS ARE DEMOLISHED EVERY YEAR

Repairing an existing structure is just the beginning of sustainability. Repairing with time-tested products that result in long-term durability is sustainability taken to a higher level. Supplying the products in a responsible manner achieves yet another level of sustainability. When the company has been at the forefront of concrete repair and protection for over 100 years, the result is the ultimate in sustainability.

Many of our projects have been recognized by our peers as the 'best' in the repair industry. Projects that have withstood the test of time. Projects that look and perform as good today as they did when they were first completed.

Preserving A Landmark

Built in 1922, the Rose Bowl has played host to many prestigious events including five NFL Super Bowls, the 1932 and 1984 Olympic Games and 'The Grand Daddy of them all' college football Rose Bowl games. In 1987 the Rose Bowl was honored to be listed as a National Historic Landmark by the Secretary of the Interior. Over the years the stadium began to show its age. Instead of demolishing this landmark, it was repaired and

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▲ **Alcatraz: 2006 International Concrete Repair Institute Recipient of Award of Excellence – Historic Preservation**

preserved in 1998. In 2008 the project was recognized by the concrete repair industry when it received an award from ICRI in the Longevity category—repair projects that perform greater than 10 years. 15 years after the preservation project the Rose Bowl continues to look brand new.

A Bridge With Many Lives

In 1905, the Ohio Missouri Bridge was built as part of a rail road network that connected Key West to the Florida mainland. In 1935, 'The storm of the century' struck the Keys washing away much of the network. The bridge survived but was abandoned when the railroad determined it could not afford to rebuild. In 1938, the bridge was widened for vehicular traffic. In the late 1990's, a new bridge was built to replace the Ohio Missouri Bridge. Rather than demolish the redundant structure, in 2011 it was restored to be part of a 60 mile nature trail to serve hikers, bikers and fisherrnen. This project represents the ideal example of sustainability: A century old structure was repurposed after 35 years, and 70 years later it was refurbished to serve a new purpose for many years to come. The restoration project was recognized by ICRI in 2011, receiving an award for Historic Preservation.

Photo courtesy of Structural Engineering Associates, Inc

Award of Excellence for Sustainability and Project of the Year

Sika Corporation was recently named in the International Concrete Repair Institute's awards ceremony for involvement with the Kansas City Ballet repair project. This was the first time in ICRI's 25 year history to honor a project for sustainability.

Energy Efficiency

Sika's EnergySmart Roof® is proven to reduce building cooling energy consumption by reflecting the sun's energy back into the atmosphere. Solar roofing turns the rooftop into a energy generating asset, resulting in a positive Return on Investment (ROI) for building owners.

Environmentally Preferable Products

Independent studies measuring the energy and environmental impacts of roofing systems – from manufacturing through processing, use, maintenance and end-of-life disposal – have concluded that Sika roofing products outperform competitive alternatives.

Greenhouse Gas Reduction

Roofing systems from the company that reduce energy consumption help to minimize the demand on power plants and lessen the formation of carbon emissions. Vegetated green roofs filter the air to improve air quality while absorbing and converting carbon dioxide to oxygen.

Waste Reduction

Sika's innovative recycling program for vinyl roofing has diverted more than 40 million pounds of vinyl membrane from landfills in just the last decade, recycling it back into roofing and waterproofing membrane products.

Longevity and recycling help to make Sika roofing systems the industry leader in sustainability.

40
MILLION POUNDS
RECYCLED
AND COUNTING!

Landfills are overburdened, and even properly constructed waste repositories can have a detrimental and often irreversible impact on surrounding eco-systems and the environment. Up to 30 percent of all solid waste now being deposited in landfills is construction debris, with much of it old roofing material.

A reduction in construction waste starts with durable products that stand the test of time. Vinyl roofing systems from Sika Corporation are notable for longevity and need to be removed and replaced less frequently, reducing the amount of waste destined for landfills while providing lower life cycle costs. Sika roofing membranes perform after decades of use in a wide range of climates, and this history of proven performance assures customers of one of the longest lasting roofing systems available.

A pioneering, post-consumer Roof Recycling Program for used vinyl roofing membranes was instituted by the

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▲ **In 2012, a new, long-lasting Sika roof was installed on the SuperTarget retail store in Olathe, KS in a reflective, energy-efficient white color. The old vinyl roof totaling 175,000 sq. ft. was removed and shipped to Sika for recycling into new roofing product.**

company in 2005 and recycles millions of square feet yearly, further reducing the burden on landfills. These older roof membranes are recycled back into new roofing membrane products.

The company reduces waste at every step in the roofing product life cycle, as it gathers excess vinyl scrap from manufacturing operations and converts 100 percent back into new roofing and waterproofing membranes. The company also recycles returned vinyl membrane trimmings contractors generate when installing new roofs.

Retailing giant Target Corporation has become well-known for its sustainable design and construction practices and has established a goal of being a zero waste company. Towards that end, Target first participated in the company's membrane recycling program when replacing the roof on one of its stores in Silver Spring, Maryland in 2007.

Since that time, Target has partnered with Sika Corporation on a multitude of additional roofing projects. Approximately 4 million square feet of roofing membrane that had reached the end of its service life on Target stores has been removed and recycled in recent years. This veritable mountain of roofing waste, representing about one million pounds of material, would have gone to landfills just a few years ago.

▲ **Sika is one of the only U.S. commercial roofing companies to have Underwriters Laboratories Environmental certification for the recycled content of its roofing membrane products.**

Energy Efficiency

Air leakage through ineffective termination details and joints are major burdens on the use of power to heat or cool buildings. Sika's focus is to make sure joints and connections remain tightly sealed between dissimilar materials in the building envelope design.

Environmentally Preferable Products

Making sealants safe for the environment during application and after their useful life is a major focus for Sika. Our continuous effort to develop low VOC and solvent free technology is demonstrated with the recent launch of Sika's patented i-Cure polyurethane technology.

Greenhouse Gas Reduction

Life cycle analysis shows the biggest contribution is in the use phase. Long lasting sealants insure joints, connections and transition details stay sealed – reducing power needed to heat and cool a building. This in turn ensures a lower carbon footprint.

Waste Reduction

Sika sealant products and packaging reduce waste on the jobsite and contain no hazardous materials at the end of their life – so disposal is safe. One example is our uni-pac foil packaging, which consumes considerably less space as it enters the landfill.

The durability of Sika's joint sealants is fundamental to sustainable construction.

Sika's innovative unipac foil packaging results in 16 times less waste per volume of sealant used compared to a standard composite cartridge.

Sealing joints, connections and terminations is one of the lowest cost areas of the entire building envelope, but one of the biggest areas of frustration if not handled effectively. Long term performance and durability of Sika's sealants puts Sika at the forefront of building sustainability. Knowledge about adhesion and compatibility to different building materials to which the sealants come in contact are essential foundations to help designers and owners build sustainable buildings.

Packaging causes the most waste during the application of sealants. Sika was the first sealant producer worldwide who introduced 600 ml unipac foil packs for 1-component products in lieu of standard cartridges to minimize the waste from packaging. The volume of space consumed by this innovative packaging technique is approximately 16x less than the typical 300 ml sealant cartridge.

Sika continues to search for innovative packaging concepts that will create less waste and impact on our environment.

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Sealants contribute little to the environmental impact caused by the construction of a building. But their proper use, performance, quality and longevity are of great importance to the total energy consumption of a building during its whole lifetime. Sealants help to tighten the building envelope and thus save heating or cooling energy by reducing air exchange between the inside and the outside.

Calculations were conducted by the University of Applied Science for Architecture, Wood and Construction in Biel, Switzerland to determine the contribution of Sika's sealant and adhesive technologies to the energy saving potential of buildings. The case study is based on a house located near Biel, Switzerland, 1020 meters above sea level. Based on this real case study it is estimated that over the lifetime of a structure the energy savings is substantial if joints and connections remain properly sealed and perform. More specifically this case study had shown that over a 20 year time span a properly functioning sealant is estimated to save almost 7 years of energy costs compared to joints and connections that are not sealed properly or if a lower performance sealant is used.

Not only do Sika sealants help buildings become more energy efficient, Sika also offers sealants that help protect the ground water via high performance in severe applications like waste water treatment and chemical containment areas. Tailor made Sikaflex® sealants are very resistant and durable and maintain their properties even under chemical and mechanical influences. Their high movement capability and water resistance ensure a tight construction and protect ground water from aggressive liquids despite movements within the construction and despite permanent water ingress.

FAÇADES, FENESTRATION & INSULATING GLASS

Energy Efficiency

Sika compatible high performance gas retaining IG sealants, structural glazing, weather seal sealants and membrane materials, help architects create façade systems that are aesthetically pleasing and energy efficient with unyielding protection from the elements.

Environmentally Preferable Products

Aesthetically pleasing and comfortable environments allow occupants to be more productive, and enhance the appeal of the buildings. Low VOC, low odor, non-ozone depleting products and systems by Sika offer excellent long term weatherability and protection for the commercial structure.

Greenhouse Gas Reduction

Meeting or exceeding LEED and energy code requirements make construction processes and façade systems work more efficiently and reduces emissions. Sika's FFI high strength silicones and IG systems enable architects to design previously unachievable standards.

Waste Reduction

Designing new façade (curtain wall) systems with Sika high strength structural glazing and IG sealants creates a longer useable life of the commercial structure, leading to new standards for measuring waste in a commercial building design and construction.

Sika high-tech façade solutions – striking the ideal balance of aesthetic appeal, long term performance and energy efficiency.

Architecture thrives on change resulting in creative ideas and bold solutions that fascinate and surprise us regularly. The building envelope design is a central part of the building's planning process. The façade not only provides the first visual impression of the building but also impacts the climate control and thus the way we feel in the building.

The design requirements of the façade are diverse and have become increasingly demanding. The standards for energy savings and longevity have become more stringent and will strongly influence future developments. The challenge is to develop sustainable systems and components which meet the requirements of modern design, energy efficiency and economical window façade construction.

Sika works with architects to create new curtain wall façade systems designed to strike the ideal balance between aesthetic appeal, long-term durability, energy efficiency and unyielding protection from the elements.

In addition to reducing repair and maintenance costs to extend the useable life of the commercial structure, weatherproof seals and other components of the façade system must manage uncontrolled air movement, moisture, heat loss and UV radiation penetration. These design objectives call for high-tech silicone sealants which are tailored to meet specific demands and guarantee peak performance in every respect. With this in mind, Sika provides a wide range of tried and tested, innovative façade, insulated glass and weather seal products for the most demanding applications.

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▲ **California Academy of Sciences Center – Sustainable buildings don't always look green, but the California Academy of Sciences in San Francisco, California, does. The California Academy of Sciences has the largest green roof in North America. Covering the 400,000-square-foot building is an undulating 2.5-acre living roof dotted with porthole-like skylights. Sikasil® SG-500 CN was used in the skylight and curtain wall facade as the structural glazing adhesive. Sikaflex® TS Plus sealant in combination SikaMembran® was used to control vapor and protect against air and moisture intrusion. Sikasil® WS-605 was used for perimeter weather seal of the skylight and wall facade systems.**

Incorporating the latest in sealant technology, Sika Corporation is committed to the development of new innovative products. Our goal is to develop sealing and bonding technologies that meet and exceed design expectations introduced by leading architects, specifiers and fabricators of curtain wall and insulated glass systems.

Extending the Life Cycle

Our current as-built environment is in need of refurbishment. Maintenance and renewal of façade systems make both economic and ecological sense. Sika has embraced this challenge with a full range of innovative products and new processes. Sika is well positioned to offer solutions to make aging buildings and infrastructure facilities fit for the decades ahead.

As an architectural monument of global standing, the Empire State Building, erected in 1931 merits particularly careful maintenance considerations. As part of the ongoing $500 million renovation project, Sika sealants where utilized on the renovation of 6,500 window units. The existing insulated glass units were removed, upgraded with Heat Mirror® technology, and resealed with SikaGlaze® IG-4429 HM to increase the R- value. The retrofitted window units were replaced and Sikasil® WS-200 MJS sealant was used to create an air and watertight perimeter seal to achieve an energy savings of 38% and re-using 95% of the original glass. In addition, the observatory was redesigned and re-glazed using Sikasil® WS-295.

Energy Efficiency

Sikafloor solutions help building owners reduce energy by providing light-reflective properties and easy to clean surfaces. With impermeable and durable products, washdown procedures and cleaning solutions are easy to implement.

Environmentally Preferable Products

Controlling the quality of indoor air has recently become a major concern as modern energy efficient buildings are characterized by increased insulation and reduced ventilation standards in terms of Very Low Emission flooring solutions.

Greenhouse Gas Reduction

Sikafloor solutions have a lower Global Warming Potential than other flooring products. Sikafloor solutions typically provide superior durability, together with additional benefits in the "use" phase.

Waste Reduction

Due to superior life spans and easy refurbishment, even after many years of service, Sikafloor solutions significantly reduce waste. In addition, Sika is focused to ensure minimal waste in its manufacturing processes and packaging for jobsite use.

Sikafloor solutions–low emissions, resource efficient and longlasting flooring systems.

In our approach to categorize and help decision makers pick the most sustainable solution for building construction, Sika is considering all impact categories and resource indicators deemed important to relevant standards. In this effort to provide useful and illustrative examples, Sika can provide Life Cycle Assessments for its flooring products and competing technologies.

How can Sika Flooring systems contribute to sustainable construction?

Raw Material and Production:

Energy and resource efficient flooring systems: Sika provides flooring systems that use less energy and resources by comparison with other technologies and systems.

Climate protection flooring solutions: Sika provides flooring systems with a low Global Warming Potential. This means a reduced carbon footprint.

Application:

Air quality flooring solutions: Sika provides low Volatile Organic Compound (VOC) and VOC-Free flooring solutions, which help to avoid summer smog and improve health and safety conditions during the floor installation process.

Use and Maintenance:

Air quality: Sika provides low emission flooring solutions, which fulfill all of the demanding requirements for Indoor Air quality in both Public and Private Buildings. Specific Sika flooring solutions are also produced for Clean Room facilities that have the lowest levels of emissions possible.

Maintenance:

Sika seamless flooring systems allow better and easier cleaning over time when compared to other flooring materials with grouted joints or with welds.

Refurbishment:

Sika flooring systems can easily be refurbished to extend their service life, thereby reducing costs, energy and resources compared with other flooring technologies.

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▲ University of Berkeley relies on Sika ComfortFloor for low emissions and ultimate comfort.

End-of-life:

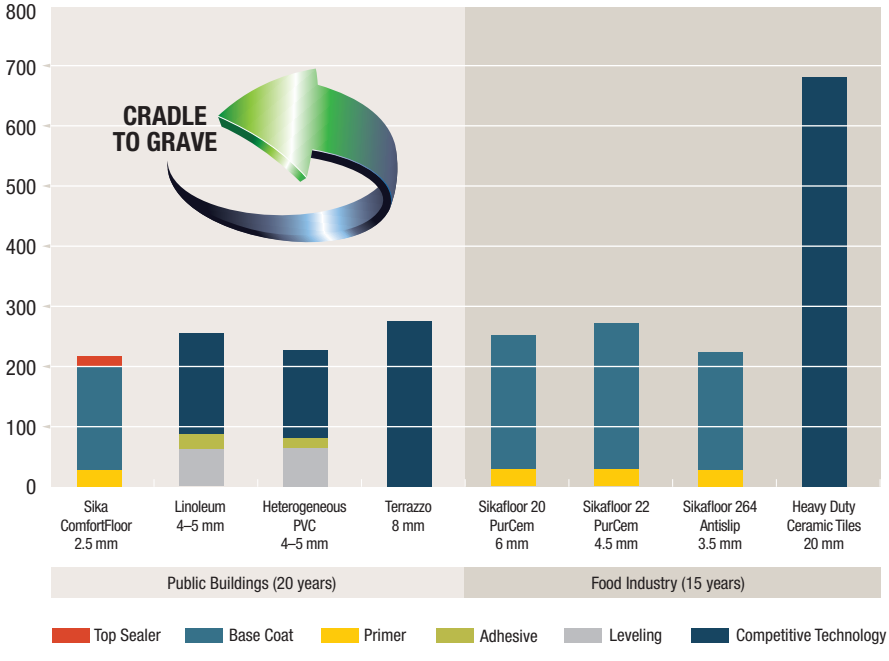
High performance Sika flooring solutions provide comparatively thin flooring systems, which means that there is less material to be managed at the end of its service life.

How does Sika illustrate the benefits of its flooring technologies?

Increasingly, owners and specifiers demand data to prove the Life Cycle Assessments of various types of materials and systems. Sika understands and supports this comprehensive effort to provide product information to building owners, managers and designers.

As an example for this comprehensive approach, the Life Cycle Assessment for cumulative Energy Demand in the production of various technologies is displayed. Sika can present comprehensive data on Global Warming Potential, and the Photochemical Ozone Creation as well as assessments of regeneration and Cradle to Grave analyses.

Cumulative Energy Demand (CED) for 10 sq. ft. flooring system [MJ/sq. ft.]



Energy Efficiency

As part of the total building envelope , Sika Greenstreak Waterproofing systems help keep buildings air and water tight making them more energy efficient.

Environmentally Preferable Products

Sika Greenstreak is actively reducing impacts on human health and the environment now and for future generations by reducing manufacturing emissions, using a water recycling system, and lowering manufacturing process utility consumption.

Greenhouse Gas Reduction

Sika Waterproofing is lowering manufacturing process gas emissions within the plant environment to improve air quality and employee safety through the installation of innovative air handling systems.

Waste Reduction

Sika Greenstreak has a zero-waste production process where all waterproofing joint products are manufactured. Membrane products, such as SikaProof A are designed to minimize waste on project sites.

Sustainable high performance waterproofing solutions.

With a combined industry experience of over 150 years, Sika Greenstreak's waterproofing solutions use time-proven technology to meet customer expectations and increase structure life cycle performance. High quality materials and "whole system" synergies provide optimal protection against water intrusion/loss and premature structure deterioration.

Sika Greenstreak was proud to be involved in the Taum Sauk Upper Reservoir Replacement project that was completed in 2010.

- The 440 MW hydroelectric power generating station at the base of the mountain utilizes the water stored in the reservoir to generate low cost sustainable power.
- The use of Sika Greenstreak's high quality joint products will improve life cycle performance and divert construction waste from landfills thereby allowing critical facilities, like the Taum Sauk Upper Reservoir, to remain in service for generations to come with minimal impact to the environment.

Rebuilding a National Monument for Future Generations

In 2010, funds from the American Recovery and Reinvestment Act made the $34 million renovation of the Lincoln Memorial Reflecting Pool possible. The reflecting pool was redesigned to address the water quality and watertightness issues with the structure.

Sika has complete waterproofing system solutions by offering industry leading watertight joint products through Sika Greenstreak. Combined with watertight concrete products from Sika, this whole system approach to providing watertight construction solutions is branded Sika's "Whitebox".

▲ **The Taum Sauk Upper Reservoir included 57,000 lineal feet of Sika Greenstreak PVC waterstop to provide watertight joints in the structure.** – Photo Courtesy of Paul C. Rizzo Associates, Inc.

▲ **Lincoln Memorial Reflecting Pool, Washington, DC.**

- The old reflecting pool required more than 30 thousand gallons of city potable water per year. This ongoing loss of water meant regular purchase of potable water from the District of Columbia, an annual expense of $137,000.
- Sika "Whitebox" concept met the demanding specification requirements for water-tightness, durability, and construction efficiency/economy with:
  - Sika Watertight Concrete Solutions
  - Sika Greenstreak Hydrotite Jointing System

Through the use of high quality products and the "Whitebox" system approach, the Lincoln Memorial Reflecting Pool will continue to be a treasured national monument for generations to come.

▲ **The Westec line of chemically resistant waterstops is used to seal joints in containment structures for hazardous chemicals, protecting the immediate environment from spills.**

CONCRETE

Energy Efficiency

From grinding aids that improve mill efficiency & output, to admixtures that reduce cement, allow higher utilization of supplementary cementitious materials (SCM's) and reduce necessary curing, our products help decrease the amount of embodied energy necessary to manufacture concrete.

Environmentally Preferable Products

Sika is in continuous search of raw materials that are both renewable and decrease our dependence on oil based materials. We have grinding aids and admixtures that chemically enhance strength and improve the performance of SCM's allowing their use in higher volumes.

Greenhouse Gas Reduction

Cement contributes 5 – 6% of the world's annual CO_2 emissions. Sika's water reducers allow for cement reduction & optimization, our accelerators can reduce energy necessary for curing, and our LCA mix design tool can help concrete producers make informed and more ecological material choices.

Waste Reduction

We create zero waste in the manufacture of our admixtures and we help our customers to do the same. Consistency, long slump life, and stable air are key elements to zero rejected loads.

A primary building block of construction is also a primary source of sustainability.

THE SCIENCE OF
SIKA
ADMIXTURES

In general, the utilization of concrete as a building material is a wise choice in efforts to make long lasting, durable, sustainable structures. With our cement grinding aids, concrete admixtures, and mix design tools Sika can help concrete manufacturers, building owners and designers make their concrete structures longer lasting and more environmentally friendly.

Making concrete an even more sustainable product comes down to choosing the best and most ecological materials as well as finding better, more efficienct methods for manufacturing and placement. Sika products and services can help achieve this. Performance that pays, sustainability that's smart.

Good Material Choices & Mix Design

Experts in Local Materials

With some of the most experienced sales professionals in the industry, our technical team has the ability to help concrete producers best utilize locally available materials and design concrete mixes that meet durability requirements.

Sika LCA Tool

Sika's Life Cycle Assessment (LCA) tool can help concrete producers and consumers understand the impact of a concrete mix design on the environment. The LCA tool allows concrete producers to directly compare mixes and provide key environmental indicators to the concrete consumer.

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▲ **The Lincoln Memorial Reflecting Pool was originally built in 1924 and by 2009 was leaking over 30,000 gallons of potable water into the surrounding subgrade annually. The pool was completely reconstructed in 2011 utilizing 11,000 CY of concrete treated with Sika Watertight Concrete Powder. To insure no more loss of one of our most precious commodities, drinkable water, Sika Greenstreak waterstops and other jointing materials were utilized. In addition, the concrete was designed to include a shrinkage reducing admixture helping to ensure the long term durability of the structure.**

Design for Durability

Concrete that lasts is concrete that is sustainable. Our SikaGrind products for cement grinding can improve both early and late age concrete strengths while our admixtures can directly help improve the long term durability of concrete.

Efficiency in Manufacture and Placement

Optimize Mix

Our ViscoCrete water reducers have the ability to help concrete producers optimize concrete mix designs by reducing cement contents and utilizing higher volumes of SCM's. In addition, enhanced strength from our SikaGrind products for cement means less cement is necessary for concrete. Our concrete professionals also have access to specialized mix design software that indicates the most efficient materials and weights for best possible particle packing.

Reduce Energy for Grinding & Curing

With SikaGrind cement producers have the ability to enhance production rates, this means making more product with less energy. For precasters & contractors we can help reduce the energy used for curing through the use of Sika Accelerators.

Mix Consistency & Predictable Performance

Rejected concrete due to inconsistency or non-conformance is a big issue; it not only hurts a producers bottom line but the environment. Sika ViscoFlow products provide controlled workability retention, which minimize air fluctuations and prevent jobsite water addition. In addition, our Sika AE products provide some of the most consistent, stable, high quality plastic and hardened air contents. This means fewer rejections and higher durability.

▲ **The ultimate in sustainability, power generating windmills made out of long lasting, durable concrete.**

BUILDING ENVELOPE

Energy Efficiency

SikaSmart Building Envelope Systems improve Energy Efficiency with a "whole building envelope performance" approach to managing uncontrolled air movement, moisture and heat loss.

Environmentally Preferable Products

Low VOC, no odor, non ozone depleting products and systems by Sika offer excellent long term protection for the Building Envelope.

Greenhouse Gas Reduction

Meeting ENERGY STAR® targets, the Functional building operates more efficiently, saving money and reduces emissions. Protecting the building envelope with low pollutant emission products will offset annual CO_2 emissions.

Waste Reduction

SikaSmart building solutions restore concrete and masonry buildings, parking garages and historic projects which can further reduce the amount of materials sent to landfill sites. Protecting the building envelope from water intrusion and premature deterioration of construction materials will increase the lifespan of the building.

SikaSmart sustainable building envelope technology promotes building functionality.

Learn more about SikaSmart® building envelope solutions using our interactive building at http://usa.sika.com

Todays design professional understands improving the energy performance of our existing building portfilio almost always offers environmental savings. A reduction in climate change can be achieved through reusing and retrofitting existing buildings and structures over demolition and new construction.

Subject to building type, regional location and energy efficiency the environmental savings for building retrofits may range between 4 and 46 percent over new construction. Building retrofit and reuse diverts building waste from landfill sites, reduces CO_2 emissions while balancing environmental impacts in the categories of ecosystem quality and human health.

Every year millions of square feet of buildings are demolished and replaced with new construction.

Retrofitting and improving the efficiency of an existing building is almost always the best option regardless of building type and climate.

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Common Causes of Building Envelope Failures

- Unreliable system design
- Reliable system design built wrong, poor workmanship
- Incompatible products and inappropriate applications
- Details not properly detailed
- Premature aging of materials and substrate failures
- Specified materials that fall short of perceived performance properties
- Use of buildings differently than original design intent
- Wrong products used to repair them

SikaSmart Building Envelope Systems Provide Air & Water Tight Protection

Sika Building Envelope systems provide continuous plain of air and water-tightness which guard against the 5 mechanisms of water intrusion.

- Kinetic Energy: Wind driven rain
- Surface Tension: Such as water that travels across the underside of balconies
- Gravity: Water that cascades down and over the façade
- Capillary: Similar to surface tension – water can 'wick' up several feet
- Air Pressure Drop (Suction): Wind velocity creates positive and negative pressures causing a "suction action".

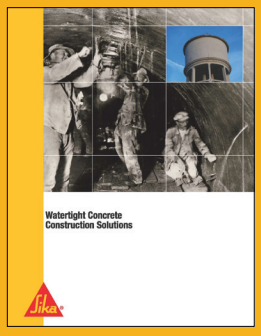
The Building Envelope is field-assembled from numerous materials with varying properties, for specific functions, one piece at a time by many different trades people. SikaSmart Building Envelope Systems is SIka's approach to being the single resource for fully integrated, compatible products and systems. Water intrusion, weathering, air leakage and premature deterioration of construction materials and assemblies is preventable.

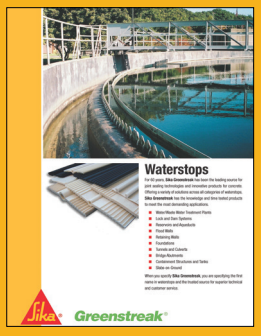
Sika – Your Local Partner with a Global Presence

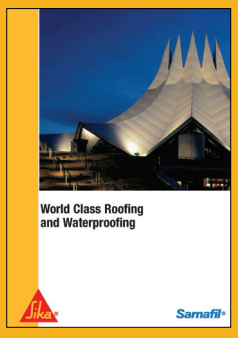
Sika is a globally active specialty chemicals company supplying the building and construction industry, as well as manufacturing industries. It is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting load-bearing structures.

Sika's product lines feature high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring, and roofing and waterproofing systems. The company has a local presence in 80 countries and more than 15,000 employees to guarantee the success of all partners.

Sika Corporation can assist you with all your construction needs.
Call 800.933.SIKA (7452) to learn more about our comprehensive products and systems. Also Available:







BUILDING TRUST

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