

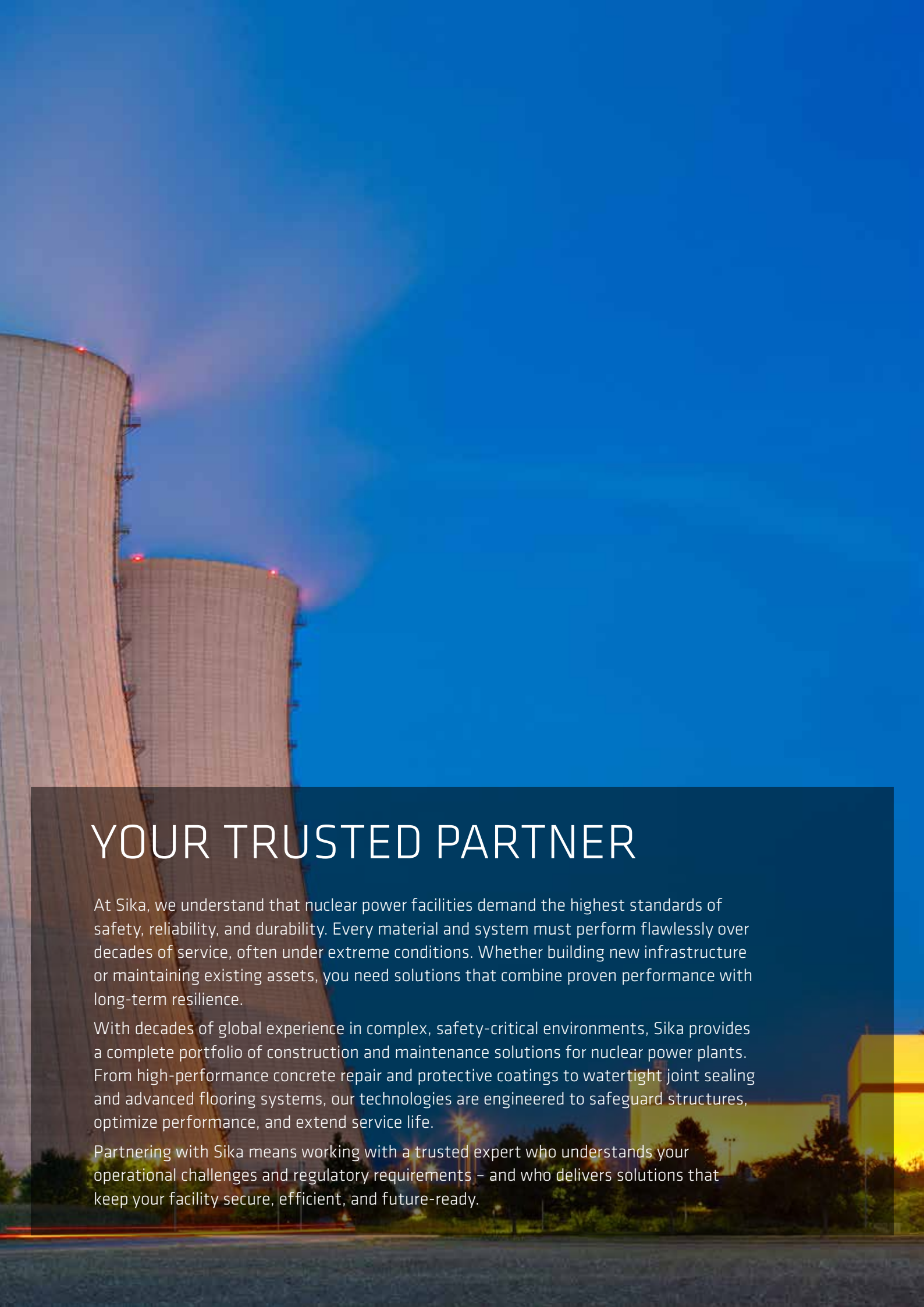


YOUR TRUSTED PARTNER FOR
NUCLEAR POWER INDUSTRY



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A photograph of two large, white, cylindrical cooling towers of a nuclear power plant. The towers are illuminated from below, and their tops are lit with red lights. The sky is a deep blue, suggesting dusk or dawn. In the background, other industrial structures and trees are visible, some lit with warm yellow lights.

YOUR TRUSTED PARTNER

At Sika, we understand that nuclear power facilities demand the highest standards of safety, reliability, and durability. Every material and system must perform flawlessly over decades of service, often under extreme conditions. Whether building new infrastructure or maintaining existing assets, you need solutions that combine proven performance with long-term resilience.

With decades of global experience in complex, safety-critical environments, Sika provides a complete portfolio of construction and maintenance solutions for nuclear power plants. From high-performance concrete repair and protective coatings to watertight joint sealing and advanced flooring systems, our technologies are engineered to safeguard structures, optimize performance, and extend service life.

Partnering with Sika means working with a trusted expert who understands your operational challenges and regulatory requirements – and who delivers solutions that keep your facility secure, efficient, and future-ready.

DELIVERING THE RIGHT SOLUTIONS TO MEET YOUR CHALLENGES



SAFETY AND COMPLIANCE

Ensuring safety in nuclear power plants is a critical challenge due to complex systems, strict regulatory requirements, and the need to protect workers, the public, and the environment.

Sika contributes by providing high-performance materials and solutions that enhance structural integrity and support compliance with stringent safety standards. By enabling safer construction and long-term operational reliability, Sika helps nuclear facilities meet regulatory requirements while safeguarding people and the environment.



DURABILITY

Durability represents a major challenge in nuclear power plant construction, as structures must perform safely for decades under extreme conditions and radiation exposure. Ensuring resistance to aging, cracking, and environmental stress is essential for long-term reliability.

Sika supports this through advanced innovative solutions that enhance resilience and extend service life. By improving material integrity and reducing maintenance needs, Sika helps ensure safe and durable nuclear power infrastructure for generations.



SUSTAINABILITY

The construction of nuclear power plants presents significant sustainability challenges due to their complex design requirements, long construction timelines, and the need for highly durable, safety-critical materials. From the massive quantities of concrete and steel used to the stringent standards for radiation shielding, leak-tightness, and long-term performance, ensuring sustainable practices throughout the construction phase is both essential and demanding.

Sika contributes to the sustainability of nuclear power construction through advanced material technologies that enhance durability, reduce lifecycle emissions, and extend service life.

CONCRETE POWER

SOLUTIONS FOR DURABILITY & SUSTAINABILITY

DURABILITY IS UNDENIABLY A PRIMARY REQUIREMENT for concrete applications in nuclear power plant construction. Furthermore, ensuring long-term performance requires a strong focus on material quality, optimized mix designs, the science of chemical admixtures, and a deep understanding of aggregate-paste transition zones.

DURABILITY

Continuous micro-structural changes from within, coupled with environmental impacts, will cause changes in the properties of concrete as it ages. To counter various agents, such as chlorides, sulphates, carbon-dioxide and moisture, impermeability of concrete is key to a long-lasting structure.

Our leading range of concrete admixtures includes Sika® ViscoCrete®, SikaPlast® and Sikament®, all with unique water-reducing properties that allow the use of optimised quantities of supplementary cementitious materials, such as ground granulated blast furnace slag, pulverized fuel ash and micro silica. This enhances the durability of nuclear power

plant structures through the reduction of permeability, water absorption, whilst increasing the resistance to chloride and sulphate attack.

Our admixture specialties such as SikaControl®, Sika® CNI, Sika® FerroGard®, SikaFume® thanks to their action on shrinkage and corrosion inhibition, also contribute towards the durability of concrete.

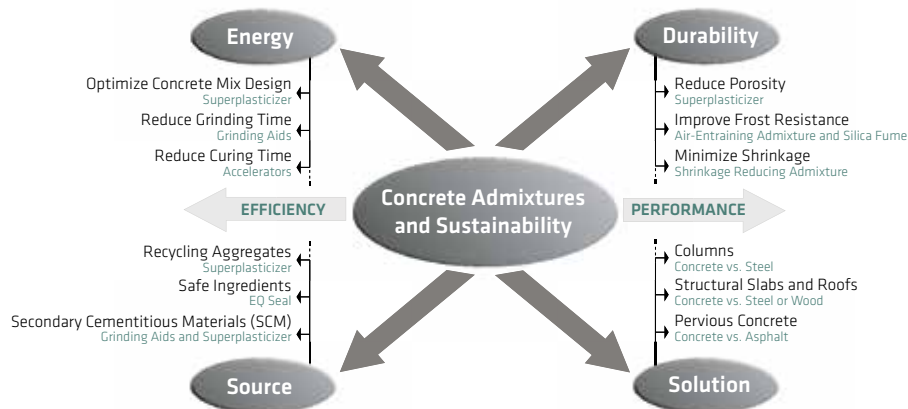
Beyond durability, Sika's admixtures, developed over decades, also enhance the flexibility, workability, and sustainability of the concrete used in nuclear power plant construction.



SUSTAINABILITY

Concrete admixtures can improve the sustainability of concrete in many ways. Firstly, they can improve the quality and performance of the concrete significantly, which extends its service life. The addition of stabilizing and special water reducing admixtures also enables recycled aggregates to be used for the production of good quality concrete. Finally, the energy required to obtain high early strengths in precast concrete can be greatly reduced or even completely replaced by water reducing and accelerating admixtures.

Our admixtures – Sika® ViscoCrete®, SikaPlast® and Sikament®, along with Sika® Stabilizer (our unique viscosity modifying admixture) – facilitate the increased use of supplementary cementitious materials in concrete. This helps optimize heat of hydration in mass concrete applications, providing better control of peak temperatures.



FLEXIBILITY

Our latest innovations have revolutionized ready-mix and pre-cast applications. With no impact on the setting times of concrete, Sika ViscoFlow®, SikaTard® allows consistent workability of concrete over longer periods of time (typically two hours or more) and reduces cracking risks due to delayed setting. This makes them ideal for hot or complex projects where long slump retention and retardation for extended workability are critical.

WORKABILITY

Sika® ViscoCrete®, SikaPlast® and Sikament®, in conjunction with Sika® Stabilizer viscosity modifying admixtures, enable the production of self-compacting concrete. This eliminates the need for vibration, reduces manpower, and, especially when used with our Sika® Separol® water-based release agent range, achieves high-quality concrete with an excellent finish.



CONCRETE

POWER-FULL PERFORMANCE

Additionally, the time-tested range of Sika concrete admixtures caters to specific needs in the construction of nuclear power plants.

NORMAL CONCRETE WITH HIGH DURABILITY

This is primarily for concrete with a water/cement ratio exceeding 0.40. Our Sika® ViscoCrete® and SikaPlast® high-performance water reducers are best suited for producing highly workable concrete with excellent water reduction capabilities, which in turn enhances impermeability.

KEY BENEFITS OF Sika® ViscoCrete® AND SikaPlast®:

- Improved placement due to controlled rheology
- Higher strength and enhanced durability
- No segregation even at high workability
- Early demolding and shorter curing cycles
- Better dimensional stability

In cases where stringent requirements demand extended workability retention (>2 hours or more) for mixes with a water/cement ratio above 0.40, Sika ViscoFlow® technology can be utilized for optimal performance.

SPECIAL CONCRETE APPLICATIONS WITH STRINGENT DURABILITY PARAMETERS

Offering unmatched technology with versatility in high-performance areas such as **low permeability/low water absorption concrete** and **low shrinkage applications**, our Sika® ViscoCrete® and SikaPlast® formulations are effectively used for:

- High-performance concrete
- High-strength concrete
- Self-compacting concrete

With their unique nano-scale repulsion effects, Sika® ViscoCrete® and SikaPlast® allow faster mixing logistics at large-scale projects under various construction conditions. These hyperplasticizers are based on the latest **advanced polymer technology** and include variants like Sika® ViscoCrete® SC for **precast applications**.



Sika has led the way in construction chemicals since the early 1900's. Combining revolutionary technology capabilities with a strong vision, it has innovated admixture solutions to meet the demands for highly durable concrete in the nuclear power construction industry.

Solutions for:	Application	Product	Description
Concrete¹	Plastic Concrete (S1-S3)	SikaPlast®, Sikament®, Sika® ViscoCrete®	Normal & Mass concrete for raft/foundation, structural concrete
	Fluid Concrete (S3 - S4)	Sika® ViscoCrete®	- High performance & self compacting concrete - Slip Form Concrete
	Self Compacting Concrete	Sika® Stabilizer, Sika® ViscoCrete®	Mass self compacting concrete
	Long Slump Retention	Sika ViscoFlow®, SikaTard®	Retarders and Slump keepers
	Accelerated Concrete	SikaRapid®, SikaSet®, Sika Aer®	Cold temperature casting
	Mass Concrete	SikaTard®, SikaControl®, SikaFiber®	Retarders, Shrinkage reducing agent and micro fibres
	Slab on grade	SikaFibre® Force	Macro fibre to replace steel reinforcement
		SikaFibre®, SikaControl®	Micro fibre and admixture to reduce shrinkage
	High Durability Concrete	Sika® CNI, Sika® FerroGard®, SikaFume®	Corrasion Inhibitor admixture
	Waterproof Concrete	Sika® Hydrofuge	Normal & Mass concrete for raft/foundation, structural concrete
	Pumpable Concrete	Sika® Stabilizer Pump	Pumping help
	Underwater Concrete	Sika® Stabilizer	Anti-wash admixture and cohesion agent
	Precast Concrete	Sika® ViscoCrete®, SikaFiber® Force	Anti-erosion blocks, segments, Tunnel Segments, Precast beams..etc.
	Bolt reservation Filling - Improving manning-strickler coefficient	Sika MonoTop®	Cementitious mortar R4 type
	Shotcrete	Sika® ViscoCrete®, SikaFiber® Force, Sika® Sigunit® AF	Sprayable concrete for special works
Tunneling	Back filling mortars, Tail Grease, Polymers	Sika® Stabilizer TBM Range, Sika® Foam TBM, SikaFix®	TBM Specialty products
Concrete Surface Improvement	Mold release agent	Sika® Separol®	Range of Mold Release Agent Normal and Emulsions (Water Based or others)
	Curing compound	Sika® Antisol®	Curing of concrete surfaces (Non-Film Forming or Film Forming)
		Sikagard®-65WN	Tunnel segments curing compound and external protection
	Surface Retarders and disactivate	Sika® Rugasol®, SikaCem® Désactivant	Producing exposed aggregate to reduce surface preparation for subsequent bonding
Structure Post-tensioning	Post-Tension cable grout	Sika® Intraplast® CFG	Cable grout admixture in powder form

¹ Given the large volume of concrete to be cast at once and the multiple mix designs required, the Concept Mix and Flow should be taken into account.
For more details, please reach out to Sika.

WATERPROOFING

POWERFULL SEALS

SAFE AND DURABLE

Waterproofing plays a critical role in ensuring the long-term durability and safety of nuclear power plants.

Proper waterproofing solutions protect key structural elements, including underground facilities, containment areas and reactor buildings, from water infiltration, chemical exposure, and environmental wear. Ensuring watertight structures enhances resistance against:

- Groundwater ingress that could lead to structural deterioration
- Corrosive effects of chemicals and radioactive contaminants
- Temperature fluctuations and freeze-thaw cycles that can cause cracks
- Leakage that may impact operational safety and long-term maintenance costs

Sika provides high-performance waterproofing solutions such as [SikaProof®](#), [Sikaplan®](#), [Sika® Igolflex®](#), and [SikaShield®](#) that deliver superior resistance to hydrostatic pressure, preventing leaks and enhancing the overall durability of nuclear facilities

POWERFUL SEALS TO INEVITABLE JOINTS

Like all large concrete structures, nuclear power plants need to have numerous construction joints and each of these is a point of potential water ingress. Sika offers a range of products that can create watertight joints even in the most complex and demanding designs. The range includes [Sika Waterbar®](#) FB 125 the next generation TPO/FPO Waterbar based on fully bonded A+ technology, [SikaFuko®](#)

a re-injectable hose system for lifetime watertightness of construction joints, and [SikaSwell®](#) expandable gaskets and [Sika Waterbar®](#) range of PVC water stops. These are complemented by range of [SikaInject®](#) for cracks and joint injection systems, to [Sikadur-Combiflex®](#) elastomeric tapes for very wide joints.



Solutions for:	Application	Product	Description
Below – Grade Waterproofing	Construction Joints	Sika Waterbar® FB 125	Next generation TPO/FPO Waterbar based on fully bonded A+ technology
		SikaSwell® A, SikaSwell® S-2	- Hydro-swelling profile - Hydro-swelling sealant to bond SikaSwell® A profiles on concrete
	Construction Joints and Expansions Joints	Sika Waterbar® PVC-P Range, Sika Waterbar® Tricomer Range	PVC profiles for construction, expansion joints and compartmentalization
		Sika Waterbar® Elastomer Range	Rubber profiles for construction and expansion joints
		SikaFuko® Range	Re-injectable hoses for construction joints (can be used in complement with other joints treatment systems)
		Sikadur-Combiflex® Range	Post-applied tape systems adhered with epoxy resin onto the membrane, providing an ideal solution for construction and expansion joints
	Injection resins	SikaInject® Range	Full range of injection compounds (Epoxy, PU, Acrylic, Cement)
	Waterproofing of below-grade Construction	SikaProof® A+	Fully bonded TPO/FPO sheet membrane system for pre-applied and post-applied below ground waterproofing
		Sikaplan® WP	Loose laid synthetic PVC waterproofing membranes for compartmentalization system
		SikaShield®	Bituminous sheet membrane for pre-applied and post-applied below ground waterproofing
	Protection of below-grade concrete	Sika® Igolflex®	Bituminous protection coatings
	Drainage Membranes	Sika® Drain	Protection Membranes for waterproofing and coatings before back filling



FACADES SOLUTIONS

ENDURING **POWER** SHIELD

DURABILITY, WEATHER RESISTANCE, ENERGY EFFICIENCY, AND STRUCTURAL SAFETY

The facade of a nuclear power plant plays a critical role in structural protection, energy efficiency, and environmental resistance. These facilities require high-performance facade solutions that can withstand extreme weather conditions, radiation exposure, chemical pollutants, and mechanical stress, while also ensuring airtightness, durability, and long-term functionality.

As a global expert in construction chemicals and facade technologies, Sika delivers high-performance solutions for sealing, bonding, waterproofing, and insulation in nuclear power plant facades. These systems enhance structural resilience, energy efficiency, and sustainability while ensuring compliance with stringent nuclear industry safety standards.

STRUCTURAL GLAZING AND FACADE BONDING SOLUTIONS

Facade glazing in nuclear power plants must be highly durable, weather-resistant, and impact-resistant while maintaining long-term adhesion and airtightness. Sika provides silicone-based structural glazing and weatherproofing solutions designed for high-performance facades.

FACADE SEALING AND WATERPROOFING SOLUTIONS

To prevent moisture ingress, air leaks, and environmental damage, Sika offers high-performance sealants and waterproofing systems that enhance airtightness and energy efficiency.

CONCRETE PROTECTION AND THERMAL INSULATION

Concrete facades in nuclear power plants must endure harsh environmental conditions, thermal expansion, and structural stress. Sika's advanced protective coatings and insulation systems improve durability and thermal efficiency, ensuring long-term performance.

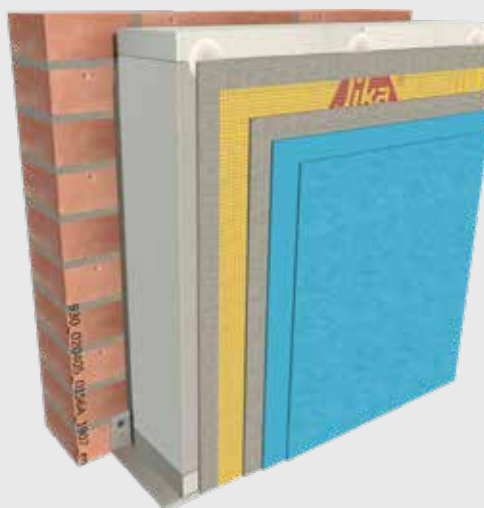


Solutions for:	Application	Product	Description
Facade	Sealing wide expansion / seismic joints	Sikadur-Combiflex® Range	Post-applied tape systems adhered with epoxy resin onto the membrane, providing an ideal solution for construction and expansion joints
	Facade Anti seismic joints	Wabo®SeismicCover WFE/ WFX	Seismic wall expansion joint cover
	Facade fairing coats	Sika MonoTop®, SikaRep®	Fairing and repair mortars
	Facade sealant	SikaHyflex®-250 Facade	Polyurethane Expansion Joint sealants for Facade waterproofing
	Facade colored Plastering	Parex® Range	Facade colored plastering
	External Wall Insulation	Sikatherm® EIFS and ETICS	High-performance External Thermal Insulation Composite System (ETICS) for energy-efficient facade insulation
Curtain walls	Curtain walls bonding and sealing	Sikasil® WS-605 S, Sikasil® SG	- High-performance, non-streaking silicone weather-proofing sealant, CE-marked - Products for Structural Glazing for Facade
Facade / Concrete Corrosion Protection	Facade Waterproofing / Anti-carbonation protection	Sikagard®-5500	Colored high quality crack bridging elastic coatings
	Concrete protection for fair face concrete	Sikagard®-705L/-706 Thixo, Sikagard® H 1000/1100	Hydrophobic Impregnation
	Concrete corrosion inhibiting impregnation	Sika® FerroGard®-903 Plus, Sikagard®-8500 CI	Surface applied corrosion inhibitor
Air Tightness	Inside Shell Air Tightness	Sikagard® DW	Glass Reinforced Epoxy Air tightness System
	Outside Shell Air Tightness	SikaWrap®	Carbon Reinforced Epoxy Air tightness System

Sikatherm®

These solutions include complete Exterior Thermal Insulation Composite Systems (ETICS/ EIFS) made from high-quality, rigorously tested, and fully compatible products.

Enhancing a building facade's thermal insulation can reduce energy consumption by 35% or more. Lower heating and cooling demands result in significant energy savings and a reduced carbon footprint.



ROOF WATERPROOFING

EMPOWERED IMPERMEABILITY

SAFETY, IMPREMEABILITY AND DURABILITY

Water infiltration is the primary cause of environmental deterioration in concrete structures. Ensuring waterproofing is essential to maintaining structural durability.

In reactor buildings, preventing water penetration is critical. The seamless application of waterproofing membranes, their ability to cover complex dome structures without joints, and their long-term resistance to UV exposure are key factors in selecting an effective waterproofing system.

Sika's high-performance waterproofing solutions, including Sarnafil®, Sikalastic®, and Sikaplan®, provide long-term protection against water ingress in nuclear power plants.

These advanced membranes and coatings ensure:

- **Seamless waterproofing** with excellent adhesion.
- **Resistance to UV and environmental exposure** for extended durability.
- **Crack-bridging capabilities** to accommodate structural movements.
- **Ease of application** for large and complex surfaces.



Solutions for:	Application	Product	Description
Roofing	Roof Waterproofing	Sarnafil® T	Full Range of TPO membrane and ancillaries' products for Roof waterproofing (Green roof, accessible roof, solar roof... etc.) – Traffic White (RAL 9016)
		Sikaplan® WT	Full Range of PVC membrane and ancillaries' products for Roof waterproofing (Green roof, accessible roof, solar roof... etc.)
		SikaShield®	Full Range of Bituminous membrane and ancillaries' products for Roof waterproofing (Green roof, accessible roof, solar roof... etc.)
		Sikalastic®	Full Range of Liquid applied membrane and ancillaries products for Roof waterproofing (Green roof, accessible roof, solar roof... etc.)
	Concrete protection for fair face concrete for Reactor Building Dome	Sikagard®-705L/-706 Thixo, Sikagard® H 1000/1100	Clear penetrating water repellent to protect both vertical and horizontal concrete surfaces exposed to weathering effects and chloride ions.
	Roof Expansion Joint	Wabo®RoofCover RFC	Strips for Joint Waterproofing



GROUTING & ANCHORING

UNINTERRUPTED **POWER** PRODUCTION

SAFE, DURABLE AND SECURE CONNECTION

Dynamic machines such as power-generating turbines need to be installed so that vibration is below the specified level and all operational loads are effectively transferred to the concrete foundation.

Ensuring the uninterrupted operation of machinery requires precise maintenance of alignments and levels. Sika's precision grouts are specifically designed to provide full support at the machine base, ensuring effective load transfer to the foundation.

Our range of cementitious and epoxy-based grouts is engineered for the most demanding environments, delivering exceptional load transfer capabilities. With over 90 years of global use, Sika's grouts have become the industry standard, offering superior chemical and thermal resistance.



Solutions for:	Application	Product	Description
Grouting and Anchoring	Machine/Equipment Foundation Grouting	SikaGrout® Range	Mineral and Metal aggregate cementitious grouts
	Turbine Foundation Grouting	SikaFlow®-648, Sikadur®-42	High Precision high performance epoxy grout
	Ready to use cable grout	SikaGrout® Cable PT, SikaGrout®-300 PT/-1205	Cementitious Cable grout
	Water intake and outfall anchoring grout	SikaGrout®-9650	Ultra strength high performance underwater cementitious grout
	Rail fixing	Sika® Icosit® KC range	2 component Epoxy or Polyurethane grouts for rail fixing
	Fixing rebar/shear connectors (Anchoring)	Sika AnchorFix® Range	Full range of anchor and shear anchor fixing



Sikadur®-42+:
High Performance Epoxy Resin Grout

High performance epoxy grout with a modular concept with different reactivities: three different hardener grades for different climate zones (Solution with lower exothermic reaction and higher layer thickness).

SikaGrout®-340+:
High Performance Precision Grout with Reduced Carbon Footprint
High performance cementitious grout and pourable concrete repair mortar from 10 to 500 mm thickness (Time saving solution with low carbon footprint).

**SUSTAINABLY
IMPACTFUL**

FLOORING

OVERPOWERING RADIATION

RADIATION SAFETY AND EASE OF DECONTAMINATION

Radiation safety is critical in the nuclear power industry. Floor and wall coatings must withstand radiation exposure while allowing for easy decontamination. These coatings must also resist chemical spills, mechanical loads, high temperatures, and meet strict hygiene requirements. Ensuring durability, safety, and compliance with nuclear industry regulations is essential for maintaining operational efficiency and protecting personnel.

Flooring in nuclear facilities must be seamless, non-porous, and highly resistant to radiation, chemical exposure, and heavy mechanical loads. Sika offers a range of epoxy, polyurethane, and cementitious flooring systems that provide superior durability, safety, and ease of maintenance.

Key Benefits of Sika Flooring Systems:

- **Chemical and radiation resistance** for long-term performance
- **Seamless, non-porous surfaces** for easy cleaning and decontamination
- **High mechanical and impact resistance** to withstand heavy equipment loads
- **Antistatic and conductive options** for sensitive areas
- **Slip-resistant finishes** to improve workplace safety

Sika's specially formulated radiation-resistant flooring and coating systems for reactor structures and other high-exposure areas are available under the Sikafloor® MultiDur range. These proven solutions offer reliable protection against radiation contact.

Walls in nuclear facilities require highly durable, radiation-resistant, and easily decontaminable coatings to maintain a safe and controlled environment. Sika provides specialized wall coatings designed for chemical resistance, hygiene control, and long-term protection in demanding conditions.



Solutions for:	Application	Product	Description
Performance Flooring	Leveling screeds	SikaScreed® Range	Cementitious, pre-mixed bonded screed.
	Concrete floor hardeners and enhancement	Sikafloor® CureHard-24	High performance liquid floor hardener
		Sikafloor® EasyFinish CS-30	High performance dry shake hardener with densifier and finishing aid
	Floors in controlled areas	Sikafloor®-264+	Decontamination compliance epoxy floor system
		Epirex 1160A	
		Sikafloor® MultiDur ES-30/31	
		Sikafloor® TC 460 and BC 360	
	Floors in general area	Sikafloor® MultiDur ES-30	Self-smoothing epoxy floor system (2 mm)
		Sikafloor® MultiDur ES-10	High build epoxy floor system (0,6 mm)
	Electric conductive flooring	Sikafloor® MultiDur ES-56 ESD	ESD/ECF compliant epoxy system
		Sikafloor® MultiDur ES-24 ECF	ECF compliant epoxy system
Architectural Expansion Joint	Expansion joint fire barrier system	Sikafloor® 1324	Static crack-bridging and hard elastic polyurethane flooring
		Sikafloor®-392	Chemical resistance coatings with flexibility behavior
	Seismic expansion joint system	Sika® Ucrete® Series	Anti-Skid Polyurethane concrete
		Wabo®FireFlex HFF/HFW Emseal SJS	Fire Barrier (Horizontal Application)
Decorative Flooring	Decorative flooring for office buildings, training rooms, canteens, halls	Wabo®SeismicFloor FNB, Wabo®SeismicFloor FNB-C	Floor to Floor / Floor to Wall Seismic expansion joint covers
		Sika ComfortFloor® PS-22/-24/Marble FX	Resilient polyurethane decorative flooring
		Sikafloor® Terrazzo EM-10	Epoxy terrazzo flooring system



INTERNAL FINISHING

UNYIELDING SURFACE **POWER**

SAFE AND LONG-LASTING INTERNAL ENVIRONMENT

Internal finishing in nuclear power plants plays a critical role in ensuring durability, safety, hygiene, and long-term performance. Walls, joints, and tiling systems within nuclear facilities must withstand radiation exposure, chemical spills, mechanical wear, and strict decontamination processes. The selection of high-performance coatings, joint sealants, and tiling solutions is essential for maintaining structural integrity, operational efficiency, and regulatory compliance.

As a global leader in construction chemicals, Sika provides advanced solutions for wall finishes, joint sealing, and tiling systems designed specifically for nuclear environments. These systems ensure chemical resistance, crack-bridging capabilities, and easy maintenance, contributing to a safe and long-lasting interior.

Walls in nuclear power plants must withstand chemical exposure, high temperatures, and mechanical stress while maintaining a smooth, durable, and decontaminable finish. Sika's epoxy and polyurethane coatings provide seamless, easy-to-clean surfaces for containment areas, laboratories, and control rooms.

Joints in nuclear facilities must be airtight, flexible, and resistant to chemicals and radiation to prevent leakage, contamination, and structural deterioration. Sika offers high-performance sealants and expansion joint systems that ensure long-term elasticity and durability.

Tiling is commonly used in technical areas, laboratories, and sanitary zones where chemical resistance, hygiene, and easy cleaning are essential. Sika provides high-performance adhesives, grouts, and waterproofing systems to guarantee long-term durability and seamless tile installations.



Solutions for:	Application	Product	Description
Internal Wall Protection	Surface Leveling	Sika MonoTop®, SikaRep®	Fairing and repair mortars
	Epoxy Coating for walls	Sikagard® WallCoat WS-11	Epoxy wall system
	Walls and Floors in controlled area	Epirex 1160A, Sikagard® WallCoat WS-11, Sikafloor® TC 460 and BC 360	Decontamination compliance epoxy wall system
Architectural Expansion Joint / Fire Sealant	Expansion joint fire barrier system	Wabo®FireFlex VFF	Fire Barrier (Vertical Application)
	Seismic expansion joint system	Wabo®SeismicCover WFT, Wabo®SeismicCover WFT-C	Wall to Wall / Wall to Floor Seismic expansion joint covers
	Firestop of Liner seal and Head of Wall joints	Sikacryl®-621 Fire	Firestop and Acoustic Sealant for top of wall joints and other joints
Joints and Cracks Sealing	Polyurethane sealants	Sikaflex® PRO-3 Purform®, Sikaflex® Powercure, Sikaflex®-406 KC, Sika® Ucrete® CR 460	Movement Joint / Expansion Joint
	Polysulphide sealants	SikaSeal®-450 PG / GG Plus	Movement Joint / Expansion Joint
	Sealing wide expansion	Sikadur-Combiflex® Range	Strips for Joint Waterproofing
Interior Finishing	Under Tiling Waterproofing	Sikalastic®, SikaTop®-107 Seal	- Acrylic based waterproofing membrane - 2-component cementitious membrane
	Leveling screeds	SikaLevel® Range, SikaScreed® Range	Flooring leveling mortars
	Tile Adhesive	SikaCeram® Range	Mono-component cementitious tile adhesives
	Tile Grouts	SikaCeram® Grout Range	Mono-component hydraulic tile grouts



PROTECTIVE COATINGS

THE **POWER** OF PROTECTION

ENHANCE SAFETY, EXTEND LIFE-SPAN OF CRITICAL ASSETS

Water is essential to the operation of nuclear power plants, playing a key role in cooling reactors and turbines, wastewater treatment, and decontamination processes. Materials exposed to these water cycles must withstand chemical exposure, thermal fluctuations, high pressure, and potential contamination while maintaining long-term durability, safety, and regulatory compliance.

Sika's Sikagard® protective coatings provide high-performance solutions specifically designed for water cycle structures in nuclear facilities. These coatings ensure chemical resistance, waterproofing, and anti-corrosion protection against aggressive environmental conditions, preserving the integrity and longevity of critical infrastructure such as cooling towers, water treatment basins, storage tanks, and pipelines.

KEY CHALLENGES IN NUCLEAR WATER CYCLES

- **Chemical and Radiation Exposure** – Water treatment facilities and containment areas are exposed to corrosive chemicals, radioactive particles, and aggressive pH levels, requiring high-resistance coatings.
- **Abrasion and Erosion Resistance** – High-flow water systems and cooling towers face constant mechanical wear, necessitating abrasion-resistant coatings.
- **Waterproofing and Leak Prevention** – Cracks and leaks in basins, tanks, and pipelines can lead to structural damage and contamination risks, requiring flexible, waterproof coatings.

CORROSION AND CHEMICAL PROTECTION FOR WATER TANKS AND PIPELINES

Water storage and distribution systems in nuclear plants are vulnerable to corrosion, aggressive chemicals, and structural degradation. Sikagard® protective coatings provide long-lasting durability and chemical resistance to these critical assets.

ABRASION-RESISTANT COATINGS FOR COOLING TOWERS AND BASINS

Cooling towers, basins, and intake structures constantly face erosion and mechanical wear due to high water flow, sediment, and temperature variations. Sikagard® coatings enhance surface durability, extend service life, and improve efficiency.

In the next page we will focus on other important topics related to Water Cooling system like Tunnels and marine works.



Solutions for:	Application	Product	Description
Chemical Resistance Coatings and Waterproofing	Water tanks, basins and water intake Chambers	Sikagard® PW/-180/-62	Epoxy Protective coatings
	Tank Waterproofing	Sikagard® DW	Glass Reinforced Epoxy Waterproofing system
	High chemical resistance requirements	Sikagard®-1825	Phenol Novolac Epoxy Protective coatings
		Sikagard®-63N	Epoxy Protective coatings
		Sika® Permacor® VEL Range	Vinyl Ester protective coatings
	Waste water Treatment coating / Chemical Resistance	Sikagard®-7000 CR	Xolutec protective coatings
	Natural Draft Cooling Tower coatings system (internal shell)	Sikagard®-2406 Protection	Polyurethane protective coatings (VGB Compliant)
	Water channels	Sikagard®-190	Epoxy Polyurethane protective coatings



TUNNELING & OFFSHORE GROUTING

ENSURING SAFE AND EFFICIENT OPERATIONS

The construction and maintenance of marine works, tunnels, and cooling systems are critical components of nuclear power plant infrastructure, ensuring the safe and efficient operation of facilities. These systems require high-performance materials to withstand extreme environmental conditions, including high hydrostatic pressure, chemical exposure, marine erosion, and structural stresses.

As a significant area of investment in modern nuclear projects, these structures demand specialized solutions for:

- TBM (Tunnel Boring Machine) excavated tunnels and pre-cast segment linings
- Offshore marine structures, including cooling water intake and outfall systems
- Underwater concrete works and subsea foundations
- Corrosion-resistant coatings, marine grouts, and waterproofing solutions

With decades of expertise in high-performance construction materials, Sika offers tailored solutions that enhance structural durability, water resistance, and long-term asset protection in these demanding environments.

TUNNEL CONSTRUCTION & TBM SOLUTIONS

Efficient and durable tunnel construction is essential for nuclear power plant infrastructure, particularly for cooling water conduits and underground access tunnels. Sika® TBM additives and tail sealants enhance tunneling efficiency while effectively controlling water ingress. SikaFiber® reinforced shotcrete improves tunnel lining durability and prevents cracking, ensuring long-term structural integrity. Additionally, Sikadur® bonding agents offer superior adhesion for segmental tunnel linings, reinforcing their overall strength and stability.

PRECAST SEGMENTS & STRUCTURAL DURABILITY

For precast concrete segments and marine structures, Sika® ViscoCrete® high-performance plasticizers enhance workability, reduce water content, and increase the strength and durability of precast components like

anti-erosion blocks, tunnel segments, and precast beams. In addition, SikaFiber® Force reinforcement fibers are incorporated to enhance crack resistance, toughness, and durability, making these elements more resilient to mechanical stress and environmental wear.

To protect these elements from chemical exposure and environmental wear, Sikagard® protective coatings provide long-term durability and resistance against aggressive conditions.

OFFSHORE GROUT

Precast tunnel segments and underwater structures require high-performance materials to withstand harsh marine and underground environments. SikaGrout® offshore marine grouts ensure secure anchoring of precast tunnel segments and underwater foundations, preventing displacement and structural weaknesses.



Solutions for:	Application	Product	Description
Concrete	Self Compacting Concrete	Sika® Stabilizer, Sika® ViscoCrete®	Mass self compacting concrete
	Underwater Concrete	Sika® Stabilizer	Anti-wash admixture and cohesion agent
	Precast Concrete	Sika® ViscoCrete®, SikaFiber® Force	Anti-erosion blocks, segments, Tunnel Segments, Precast beams..etc
	Bolt reservation Filling - Improving manning-strickler coefficient	Sika MonoTop®	Cementitious mortar R4 type
	Shotcrete	Sika® ViscoCrete®, SikaFiber® Force, Sika® Sigunit® AF	Sprayable concrete for special works
Tunneling	Back filling mortars, Tail Grease, Polymers	Sika® Stabilizer TBM Range, Sika® Foam TBM, SikaFix®	TBM Specialty products
Concrete Surface Improvement	Mould release agent	Sika® Separol®	Range of Mold Release Agent Normal and Emulsions (Water Based or others)
	Curing compound	Sika® Antisol®	Curing of concrete surfaces (Non-Film Forming or Film Forming)
	Curing compound and external protection	Sikagard®-65WN	Tunnel segments curing compound and external protection
Grouting	Water intake and outfall anchoring grout	SikaGrout®-9650	Ultra strength high performance underwater cementitious grout



FIRE PROTECTION

SAFE AND COMPLIANT **POWER**

HIGH PERFORMANCE, SAFE AND COMPLIANT

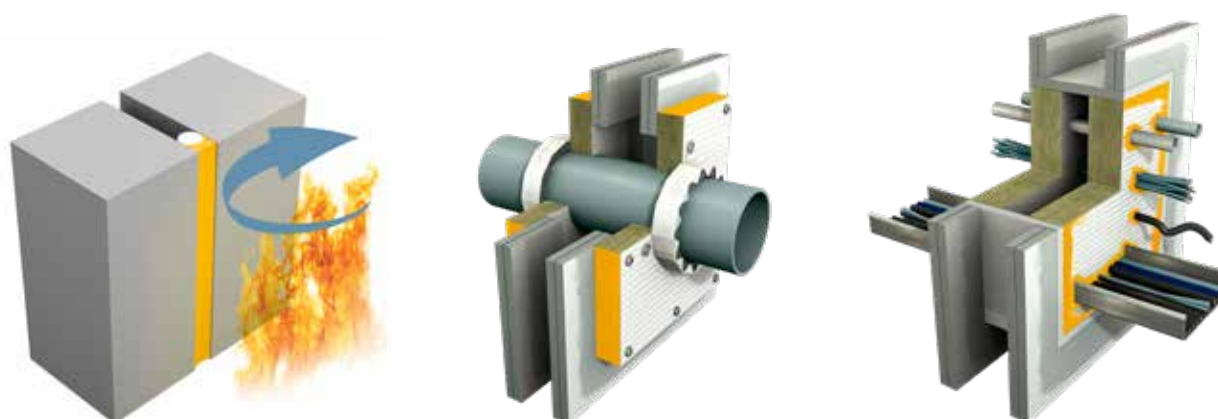
Nuclear power plants are among the most critical infrastructure facilities, requiring stringent safety measures to prevent and mitigate fire hazards. Fire protection in these facilities is essential to ensure operational continuity, protect lives, and safeguard the environment.

Passive Fire Protection (PFP) plays a crucial role in fire safety by containing fires, preventing their spread, and maintaining the structural integrity of the facility. By enhancing fire containment, structural integrity, and operational safety, Sika plays a key role in minimizing fire-related risks in nuclear facilities.

As a global leader in construction chemicals and fire protection solutions, Sika provides advanced PFP systems tailored to the stringent requirements of nuclear facilities. These systems include fire-resistant coatings, sealants, and barriers designed to withstand extreme conditions while meeting international fire safety standards.



Solutions for:	Application	Product	Description
Fire Protection	Firestop of Liner seal and Head of Wall Joints	Sikacryl®-621 Fire+	Firestop and Acoustic Sealant for top of wall joints and other joints
	Firestop of MEP penetration seals	SikaSeal®-623 Fire+	Intumescent sealant
		Sikacryl®-625 Fire+	1-part fire resistance ablative coating
		Sikaseal®-626 Fire Board+	Fire board
		Sikaseal®-627 Fire Collar+	Firestop Pipe collar
		Sikaseal®-629 Fire Wrap+	Firestop pipe wrap
		Sikacrete®-630 Fire+ , Sikacrete®-213F	Fire rated mortar
	Firestop Coating for Electrical Cable	SikaSeal®-641 Fire Coating (KBS Coatings)	Ablative Cable Coating
	Steel Fire rated coating	Sika® Unitherm®	Intumescent coatings for Steel
	Concrete Fire Protection	Sika® Pyroplast®	Intumescent Coating for Concrete



CONCRETE REPAIR & STRENGTHENING

ENHANCING DURABILITY AND SAFETY

Nuclear power plants require high-performance and long-lasting construction materials to ensure safety, durability, and compliance with stringent regulations. Concrete deterioration in nuclear power plants can be caused by chemical exposure, mechanical stress, carbonation, chloride attack, and radiation-induced degradation.

Over time, concrete structures in nuclear facilities are exposed to radiation, extreme temperatures, chemical attacks, and mechanical stress, leading to deterioration, corrosion, and reduced structural integrity.

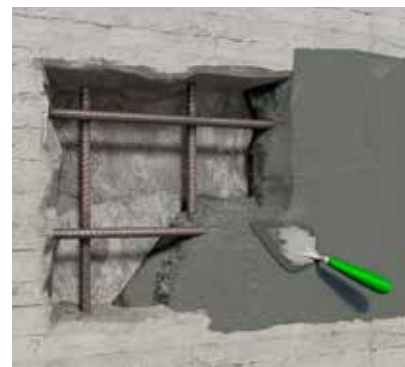
Aging structures, evolving seismic requirements, and increased operational loads may necessitate strengthening measures to maintain structural integrity. Sika provides advanced strengthening solutions, including carbon fiber composites, high-strength grouting, and post-tensioning systems.

Corrosion of reinforcing steel is a significant concern in nuclear facilities, as it can lead to structural weakening and increased safety risks. To combat these issues, Sika offers advanced corrosion protection systems that extend the service life of reinforced concrete structures.

Sika provides comprehensive solutions **for concrete repair, corrosion protection, and structural strengthening**, ensuring the longevity and safety of nuclear power plant infrastructure.



Solutions for:	Application	Product	Description
Concrete Repair	Bonding agent for old to new concrete	Sukadur®-31+ (Thixo)/-32	Epoxy bonding agent
	Mortar admixture	SikaLatex® Range	Multi purpose synthetic emulsion
	Adhesive and touch up repair material	Sikadur®-31 Range	Epoxy bedding compound and adhesive
	Rebar protection	SikaTop® Armatec®-110 EpoCem®, Sika MonoTop®-1010	Coating material with corrosion inhibitor used as bonding primer
		Sika® FerroGard® anode series	Galvanic anodes for rebars
	Structural Repair mortars	SikaEmaco® Range, Sika MonoTop® Range	Full range of structural repair mortars (Batch Repair, Pourable and Spray application)
	Reprofiling mortars / Cosmetic Repair	SikaEmaco® Range, Sika MonoTop® Range	Full range of reprofiling and surfacing mortars
Structural Strengthening	Structural Strengthening	Sika® CarboDur®, SikaWrap®	Strengthening systems based on epoxy resins, Carbon-fibre and other composite materials
Concrete Corrosion Protection	Facade / Anti-carbonation protection	Sikagard®-5500	Colored high quality crack bridging elastic coatings
	Concrete protection for fair face concrete	Sikagard®-705L/-706 Thixo, Sikagard® H 1000/1100	Hydrophobic Impregnation
	Concrete corrosion inhibiting impregnation	Sika® FerroGard®-903 Plus, Sikagard®-8500 CI	Surface applied corrosion inhibitor



Sika MonoTop® 4012 is a high-performance and sustainable one-component, ready-to-mix mortar for concrete repair and protection. It contains fly ash as a supplementary cementitious material (SCM).

- Reduced carbon footprint
- Reduced dust formation
- Meets LEED v4 requirements



SIKA: A TRUSTED PARTNER

FOR NUCLEAR POWER INDUSTRY CONSTRUCTION AND REFURBISHMENT

SIKA IS A SPECIALTY CHEMICALS COMPANY with a leading position in the development and production of systems and products for sealing, bonding, damping, reinforcing, and protecting in the building sector and motor vehicle industry. Sika provides a single source for integrated and compatible solutions from basement to roof.

110 YEARS OF EXPERTISE

Our reputation for quality and reliability is virtually unmatched and is illustrated through a comprehensive portfolio of problem-solving products that have been employed for many years in a diverse range of applications. Whether we are waterproofing your basement or your roof, protecting your floors and wall, sealing your skyscraper or your car, or working with you on your building, you will see why we are renowned for Building Trust.

WORLDWIDE PRESENCE FOR CUSTOMERS

Sika has a long track record of success as a complete system and problem solution provider on many sport facility projects all around the world. With extensive technical expertise and solid practical experience on every continent and in all types of climate and environments, Sika is a highly qualified and reliable partner for all of your projects. Sika has highly professional technical and sales teams to support our customers and their clients. These teams include qualified engineers and technicians with expertise in all of the relevant technologies and applications, together with technical service engineers that have extensive practical installation and on-site training expertise to help ensure that the work is completed correctly and is 'right the first time.'

WHAT MAKES SIKA SUCCESSFUL IS THE COURAGE FOR INNOVATION

Sika's long history of innovation has led to unparalleled success in becoming a recognized global technology leader. The company nurtures and develops an international network of scientists, partners, suppliers, and customers. We provide intelligent solutions using the most advanced technologies, service, and unique expertise. Sika has a worldwide network of 21 Global Technology Centers which take the lead in long-term research programs and the development of new innovative solutions. To meet local markets' specific needs and requirements, new products and systems are also developed across the 19 Regional and 64 Local Technology Centers.

MORE PERFORMANCE – MORE SUSTAINABLE

Innovation in Sustainable Solutions is an integral part of Sika's innovation strategy. Creating value-added products based on both higher performance and sustainability benefits is the key objective of the Sustainability Portfolio Management (SPM) approach.



WORKING WITH SIKA

Sustainability – Sika's commitment to our product development and your project includes Life Cycle Assessments (LCA) according to ISO 14040 and EN15804. Sika has clear targets for achieving a sustainable future in all aspects of our business.

Compatibility – a system approach to ensure long term performance.

Simplicity – Buildability to ensure successful installation without complications.

Dependability – Sika's commitment to suitability and quality ensure long term performance for the intended use.

Flexibility – The range of products and systems we manufacture allows the right choice for the project as well as opportunities for value engineering at the design stage.

Support – Unrivalled technical and practical support throughout the project cycle.

SIKA AT A GLANCE

- 34,000+ employees
- 100+ countries
- 400+ plants worldwide
- 3,900+ patents

Which all means that you are collaborating with a global market leader who will work with you, using our experience and expertise to arrive at the best solutions for your project, wherever it is.

PROJECT SUPPORT



Health & Safety

Safe products. H&S taken into account in design proposals



Single Source Supplier

Integrated solutions. Single point responsibility



Objective Approach to Specification

Wide range of solutions enables objectivity in our proposals



Market Leading, Quality Products

Use the best to achieve best value for the client



Buildability & Compatibility

Design for ease of installation and problem free connections and details



BIM Objects

BIM objects and CAD details to assist design & implementation



Maximizing Value

Design for value, not lowest material cost



Risk Management

Knowledge of international Standards, quality solutions and use of best practice leads to lower risks. Getting it right first time



Single Point of Contact

Time and cost saving, integrated design and compatibility



Time and Cost Saving Solutions

Integrated systems, reducing interfaces and multiple areas of use, all contribute to meeting budget and programme.



Life Cycle Sustainability Analysis

BREEAM and LEED led projects benefit from our solutions



Support through the project cycle

Technical and practical support throughout design, construction and after sales service

EARLY ENGAGEMENT TO ACHIEVE BEST VALUE

SUSTAINABILITY & DECARBONIZATION



NUCLEAR POWER IS A KEY COMPONENT in the global shift toward **low-carbon energy** and **net-zero emissions**. As one of the most efficient and reliable energy sources, nuclear power plays a vital role in **reducing greenhouse gas emissions** while ensuring energy security. However, achieving true **sustainability** in nuclear power plants requires a holistic approach that includes durable construction materials, efficient maintenance solutions, and environmentally friendly technologies.

SIKA PROVIDES INNOVATIVE, SUSTAINABLE SOLUTIONS that contribute to the longevity, safety, and environmental performance of nuclear power plants. From low-carbon concrete additives and protective coatings to energy-efficient waterproofing and corrosion protection systems, Sika ensures the nuclear industry achieve its **sustainability and decarbonization goals** while ensuring long-term operational safety.

CONCRETE ADMIXTURES



Sika® ViscoCrete® improves flowability during concrete production by reducing the water content due to its absorption behavior. The reduction in water leads to a higher structural density and reduced porosity in the cement structure.

- Reduced water demand: Up to 35% water reduction per cubic meter of concrete.
- Increased efficiency and durability: +25% higher final mechanical properties.

CONCRETE REPAIR



Sika MonoTop® 4012 is a high-performance and sustainable one-component, ready-to-mix mortar for concrete repair and protection. It contains fly ash as a supplementary cementitious material (SCM).

- Reduced carbon footprint
- Reduced dust formation
- Meets LEED v4 requirements

BASEMENT WATERPROOFING



SikaProof® A is an innovative, fully bonded sheet membrane system for damp-proofing and waterproofing in basements and below-ground structures.

- Easier and faster application: No need for welding or heat, and no maintenance required.
- Resource efficiency: Less material per m² and lower energy consumption, with net gains of 220 MJ per m².
- Lower carbon emissions: Net gains of 4 kg CO₂ per m².

FLOOR FINISHING



Sikafloor®-2510 W is a multifunctional 5-in-1 product that can be used as a primer, scratch coat, roller coat, self-leveling coat, or sealer.

- Low odor and VOC emissions: AgBB, EC1+ certified.
- Lower use of materials: Resource-saving.
- Durable and highly mechanical resistant: The floor lasts long.
- Sustainable packaging: Using bluemint® recycled tinplate.

TILING



SikaCeram®-290 StarLight

High-yield, flexibilized, low-dust tile adhesive with sustainable raw materials for the thin and medium-bed method up to 15 mm layer thickness of class EN 12004 C2 TE S1.

- Reduced CO₂ footprint per square meter
- Low dust formation during handling
- Direct contribution to LEED v4 credits

SEALING JOINTS



Sika® Waterbar® FB-125

A hybrid waterstop with a rough textured surface based on flexible polyolefin (FPO). When fully embedded in cured concrete, it provides a fully bonded, durable watertight seal that prevents any lateral water underflow.

- Reduced CO₂ footprint per linear meter
- No heat welding required: No odor of PVC fumes and less energy used.
- Packaging: Up to 40% less packaging foil used, with more material supplied per pallet compared to traditional PVC products.

A GLOBAL COMPANY BUT LOCAL PARTNER



WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



SIKA SERVICES AG
Tueffenwies 16
CH-8048 Zurich
Switzerland

Contact
Phone +41 58 436 40 40
www.sika.com

BUILDING TRUST

