



# CONCRETE ADMIXTURE PRODUCT GUIDE

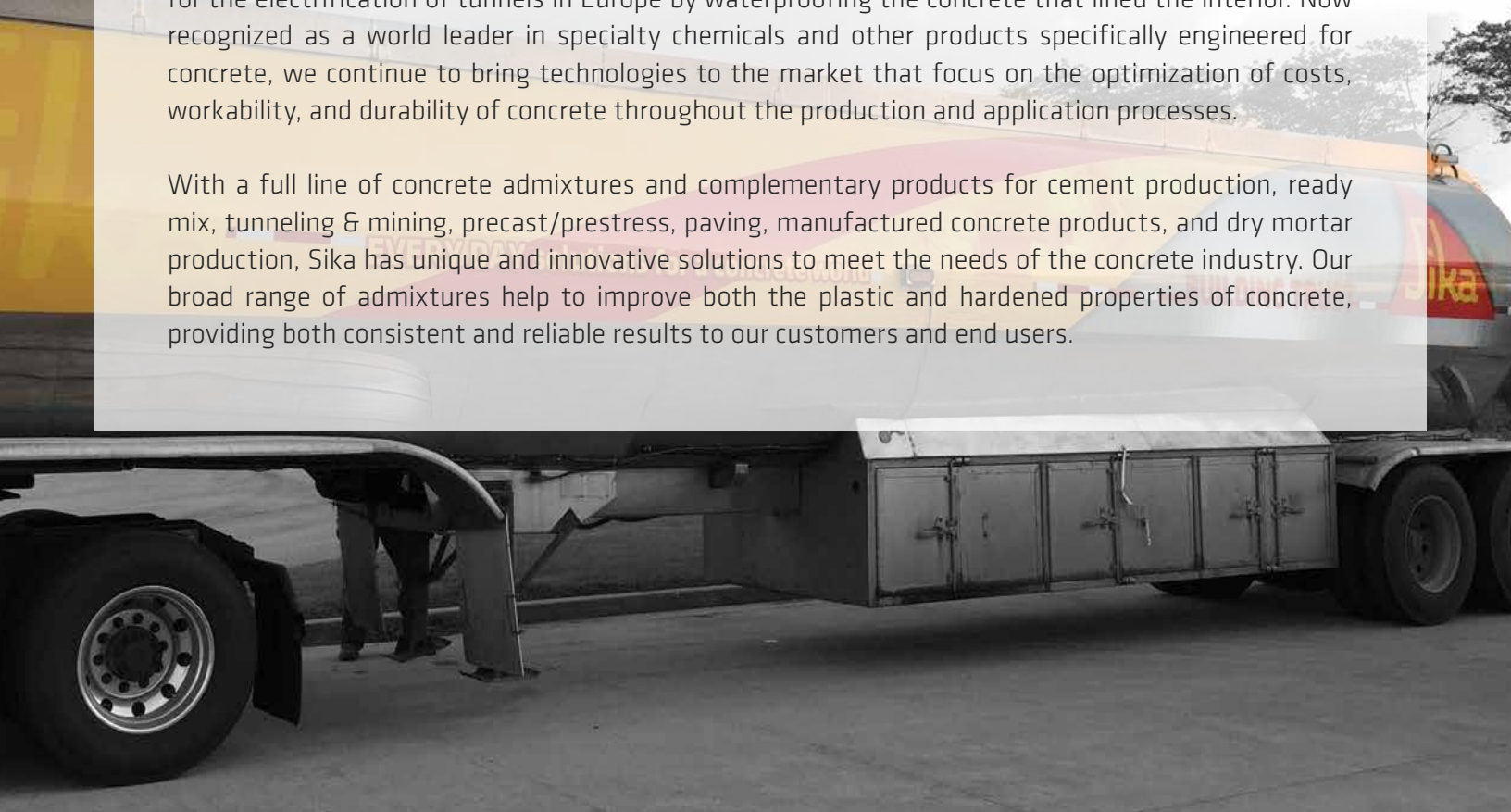
BUILDING TRUST



# A HISTORY OF EXCELLENCE

For over one hundred years, Sika has been producing high quality, innovative admixture technologies for concrete. Sika's first product, appropriately named Sika® 1, was a concrete admixture that allowed for the electrification of tunnels in Europe by waterproofing the concrete that lined the interior. Now recognized as a world leader in specialty chemicals and other products specifically engineered for concrete, we continue to bring technologies to the market that focus on the optimization of costs, workability, and durability of concrete throughout the production and application processes.

With a full line of concrete admixtures and complementary products for cement production, ready mix, tunneling & mining, precast/prestress, paving, manufactured concrete products, and dry mortar production, Sika has unique and innovative solutions to meet the needs of the concrete industry. Our broad range of admixtures help to improve both the plastic and hardened properties of concrete, providing both consistent and reliable results to our customers and end users.



## CONCRETE BEYOND COMMODITY

With a core competency and rich history in concrete production, we strive to look beyond the commodity market to design and create concrete admixtures that give our customers an advantage and set them apart in their marketplace. Sika's unique ViscoCrete® Technology is a clear example of this.

Our ViscoCrete® line of products encompasses a group of polycarboxylate based, high performing, water-reducing concrete admixtures. From conventional to high-strength, self-consolidating concrete, our ViscoCrete® products are specially formulated to provide full range water reduction with a variety of cementitious materials allowing for ultimate versatility. As the world's largest supplier of polycarboxylate

technology developed specifically for cement and concrete production, we truly understand the building blocks of polymer design. The result is products that are less sensitive to the many variables that can affect concrete, providing our customers greater consistency.

Sika partners with customers and develops a solid understanding of their business and needs, ultimately playing a role in their success. As a part of this our representatives provide the highest level of technical support from project inception to actual concrete placement in the field. We work with customers to establish value added concrete, designing mixes that stand out among the rest...taking concrete beyond a commodity product.

	PRODUCT FAMILY	PRODUCT NAME	ASTM DESIGNATION
WATER REDUCTION & WORKABILITY	Water-Reducers	Sika® Plastocrete®-161	ASTM C494 Type A, B & D
		Sika® Plastocrete®-10 N	ASTM C494 Type A, B & D
		Sika® Plastocrete®-250 🌱	ASTM C494 Type A, B & D
	Mid-Range Water-Reducers	SikaPlast®-200 🌱	ASTM C494 Type A & G
		SikaPlast®-300 GP 🌱	ASTM C494 Type A & F
		Sikament® AFM	ASTM C494 Type A & F
	High-Range Water-Reducers	Sikament®-475 🌱	ASTM C494 Type A & F
		Sikament®-686 🌱	ASTM C494 Type A & F
		Sikament®-610	ASTM C494 Type A & F
		Sika® ViscoCrete®-1000 🌱	ASTM C494 Type A & F
		Sika® ViscoCrete®-2100 🌱	ASTM C494 Type A, F & ASTM C1017
		Sika® ViscoCrete®-4100 🌱	ASTM C494 Type A, F & ASTM C1017
		Sika® ViscoCrete®-6100 🌱	ASTM C494 Type A & F
		Sika® ViscoCrete®-2110 🌱	ASTM C494 Type A & F
Sikament® SPMN		ASTM C494 Type A & F	
Workability Retaining Admixture	Sika® ViscoFlow®-2020 🌱	ASTM C494 Type S	
SET CONTROL	Retarders & Hydration Control	Sika® Plastiment® XR 🌱	ASTM C494 Type B & D
		Sika® Plastiment® 🌱	ASTM C494 Type B & D
		SikaTard®-440	ASTM C494 Type B & D
	Set Accelerators	SikaSet® NC	ASTM C494 Type C & E
		SikaSet® NC-4	ASTM C494 Type C & E
		SikaSet® HE	ASTM C494 Type C & E
	Strength/Hardening Accelerators	Sika® Plastocrete®-161 HE	ASTM C494 Type C & E
DURABILITY ENHANCEMENT	Air Entrainers	Sika® AIR	ASTM C260
		Sika® AEA-14	ASTM C260
		Sika® Air-260	ASTM C260
		Sika® Air-360	ASTM C260
		SikaControl® AIR-160	ASTM C260
		Sika® AER C	ASTM C260
	Corrosion Inhibitors	Sika® FerroGard®-901 S	
		Sika® CNI 🌱	ASTM C494 Type C, ASTM C1582
	Shrinkage Reduction	SikaControl® SC	ASTM C494 Type S
		Sika® Control-75	ASTM C494 Type S
	Shrinkage Reduction/Compensation	SikaControl® NS	ASTM C494 Type S
	Silica Fume	Sikacrete®-950 DP	ASTM C1240
Metakaolin	Sikacrete® M-100	ASTM C618, Class N	
Alkali-Silica Reaction Mitigation	Sika® Control ASR	ASTM C494 Type S	
WATER-TIGHT	Watertight Applications	Sika® Watertight Concrete Powder	ASTM C494 Type S
		Sika® WT-240 P	ASTM C494 Type S
		SikaControl® WT-240 P RED	ASTM C494 Type S
DRYCAST	Drycast Admixtures	SikaMix® PL-100	
		SikaMix® PL-200	
		SikaMix® HC-300	ASTM C494 Type F
		SikaMix® AE-3	ASTM E514
		SikaMix® AE-6	ASTM E514
SPECIALTY PRODUCTS	Specialty Admixtures	Sikament®-100 SC	CRD-C 661
		Sika® Stabilizer-4 R	ASTM C494 Type S
		Sika® Lightcrete Powder	
		SikaControl® FD-100	
	Shotcrete Accelerator	Sika® Perfin-305	
		Sika® Sigunit® L-72 AF	ASTM C1141
Concrete Placement	Sika® Rugasol-S		
	Sika® Film		
FIBERS	Concrete Fibers	SikaFiber® / Fibermesh®	ASTM C1116
		SikaFiber® Force / Enduro® / Fibermesh®	ASTM C1116
		SikaFiber® Force / Novocon®	ASTM A820

## PRODUCT DESCRIPTION

General purpose water reducer
Water reducer with controlled setting characteristics, extended setting times at higher dosages
A new generation water reducer, recommended whenever increased plasticity and higher ultimate strengths are desired
Mid-range water reducing admixture with enhanced finishability
ViscoCrete® powered cost efficient, multi-purpose mid-range water reducer
ViscoCrete® based mid-range with neutral setting characteristics, improved finishability, and slump retention
Multi-range WR, improves workability, workability retention and concrete finishability
HRWR, moderate workability retention, high early & ultimate strength, increased durability
HRWR, ViscoCrete® based, faster setting and high early and ultimate strength
HRWR, with improved slump life, finishability, high early strength, increased durability
Ultra HRWR, with good slump retention, improved finishability, increased durability
Ultra HRWR, with moderate workability retention, non retarding, for SCC and conventional concrete
Ultra HRWR, with fastest set and high early strength, suitable for precast applications
Ultra HRWR, extremely high water reduction and slump retention, high early and ultimate strength
HRWR based on melamine & naphthalene, improved workability and finishability
PCE based, increases workability retention without delay in set time, increased early strength
Water reducer/retarder, prevents slump loss, increases set time
Water reducer/retarder, effective in hot weather, enhanced workability and finish
Hydration controller, maintains workability up to several hours/days, no affect on ultimate strength
Non-chloride based set accelerator, suitable for fast track applications, protection from cold & freezing conditions
Effective accelerator where high early strength concrete is desired and the use of calcium chloride is prohibited
Chloride based, economical set accelerator, faster set time and early strength
Chloride based, water reducing, set accelerator, faster set time and early strength
Strength/hardening accelerator, non-chloride, no workability loss, for very high early strength
AEA based on organic materials, stable & predictable air, uniform void spacing
AEA based on organic materials, low spacing factor, improved air quality
Patented multi-component AEA, reduces air fluctuations, stable air
Concentrated AEA, suitable for low slump concretes, lean and fly ash mixes
Synthetic based AEA, for applications with extra low AEA dosages, SCC
Neutralized vinsol resin based AEA for use in exterior concrete needing protection from freeze-thaw damage or harmful deicing salts
Dual action corrosion inhibitor, anodic and cathodic protection, reduced occurrence of corrosion
Calcium nitrite based corrosion inhibitor, forms protective layer around rebar
Shrinkage reducing/compensating admixture used to produce concrete with reduced potential for drying shrinkage cracking and curling
Shrinkage reducing admixture, reduces cracking, easy to use
Shrinkage reducing/compensating admixture with reduced potential for drying shrinkage cracking and curling
Densified silica fume
Highly reactive metakaolin pozzolan for portland cement concrete, grouts and mortars applications
Lithium nitrate based ASR mitigating admixture, increased durability and life span
Integral watertight admixture, reduces water absorption and water penetration under pressure, also acts as water reducer
Integral crystalline admixture, reduces water absorption and water penetration under pressure
Integral crystalline admixture, reduces water absorption and water penetration under pressure where traceability of product is required
Polycarboxylate blend, drycast admixture, improves productivity, reduces porosity and machine wear
Provides quicker wetting and enhanced cement dispersion in drycast concrete application, increasing concrete density, compressive strength, and enhancing surface finish characteristics
Plasticizing admixture for drycast application, increases strength, durability and productivity, reduces water absorption
High performance primary and secondary efflorescence reducer/water repellent admixture, improved color brightness
High performance water repelling and efflorescence reducing admixture
Anti-washout admixture for under water concrete placement
Viscosity modifier, improved stability and segregation resistance, preserve slump and flow, improved surface quality
Powdered admixture for CLSM, flowable fill, lean mix backfill, unshrinkable fills
Increases density of freshly mixed, non-air entrained concrete.
Concrete surface appearance enhancing admixture
Alkali free liquid shotcrete accelerator, reduces rebound, increases early age
Surface retarder, retard set of surface mortar in concrete, suitable for exposed aggregate surface, prevent cold joints
Retards moisture evaporation from fresh concrete surfaces, prevents plastic shrinkage cracking, aids finishing
Monofilament or fibrillated micro-fibers (polypropylene, acrylic, nylon) for reduced plastic shrinkage and settlement cracking, enhances durability and toughness
Includes structural macro-synthetic fibers (UL rated); replaces WWF and traditional steel reinforcement in slab on ground applications
Steel concrete fibers engineered for long-term performance and superior crack control in demanding industrial applications

# CONCRETE ADMIXTURES

Product Selection Guide for your Next Project

## PRODUCTIVITY FROM PRODUCTION TO PLACEMENT

From the production of conventional concrete to SCC to very high early strength concrete, Sika products are formulated to help improve productivity in your plants and on the job site.

- Higher solids products improve efficiency in delivery and dosing.
- ViscoCrete® products “wet out” faster, improving production times.
- Sika® Rapid-1 is formulated to allow plant addition and still attain very high early strengths.
- Set & Hardening Accelerators that allow a decrease in curing necessary helping to turn forms faster.
- ViscoFlow® products help to improve slump retention.
- Greater utilization of supplementary cementitious materials with ViscoCrete®.

## PROJECTS, NOT PRODUCTS

Sika is not just a leader in concrete production but we also have a full line of construction products from “roof to basement”. We have products that cover, protect, seal, bond, strengthen, reinforce, make air and water tight, and ultimately improve the quality, beauty and durability of structures. We focus on a system approach, bringing owners, architects, and engineers a single source for their entire building envelope. This means our emphasis is not just products but projects. We work to provide value to both customers and A&E's through a project selling approach that benefits all throughout the construction process.



## SLAB SOLUTIONS

Sika assists design teams in creating concrete with increased joint spacing, reduced section thickness, and conventional reinforcements, as well as optimized placement characteristics, low shrinkage, increased structural loading capacity, and reduced curling.

- The Sika® ViscoCrete® series of water reducers allows for greater control over workability and set times.
- The Sika® Control® series of shrinkage reduction and compensation admixtures are ideal for reducing potential for shrinkage, cracking, and curling.
- SikaFiber® and Sika® Fibermesh® fibers provide crack reduction and replacements for traditional steel reinforcement, saving in time and labor costs.

## SHOTCRETE, TUNNELING, AND MINING

With a rich history in tunneling & mining, Sika provides both products and equipment for tunneling applications. Our alliance with Aliva allows us to offer high quality shotcreting equipment.

- Sigunit®-L72 AF is a high performance shotcrete accelerator that helps improve bond to subgrade.
- SikaTard® 440 is a hydration stabilizer that may be used in shotcreting applications.

## DRYCAST PRODUCTION

Our SikaMix® line of products is specially formulated to help improve drycast production and improve hardened properties.

- Powered by ViscoCrete, SikaMix® PL-100 helps to improve production time, product aesthetics and strengths.
- SikaMix® AE-3 is our highest performing, most efficient, silane based efflorescence controlling admixture. In test after test it has proven to help eliminate efflorescence better than competitive products.

## WATERTIGHT CONCRETE

Sika has been making concrete watertight for over 100 years. We offer a wide range of integral admixtures to improve concrete's ability to withstand water penetration. Most importantly, good watertight concrete requires high quality jointing materials.

- Sika provides a system approach to watertight concrete with a wide range of jointing materials from Sika® Greenstreak®.
- From project conception to completion Sika can offer engineering, detailing, and on site project assistance to help ensure the watertightness of structures.
- Sika® Watertight Powder is powered by ViscoCrete®, making it the most efficient watertight solution available.

# SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:



**WATERPROOFING**



**CONCRETE**



**REFURBISHMENT**



**SEALING AND BONDING**



**FLOORING**



**ROOFING**

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#### **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.

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

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