

**LIQUID CRYSTALLINE WATERPROOFING ADMIXTURE**

- Easily dosed and no mixing required
- No risk of dust and clumping while mixing
- Permanent with self-healing capabilities - can seal hairline cracks upto 0.5mm
- Unique ability to become a truly integral part of the concrete matrix
- Enhances concrete durability & reduces concrete permeability right from start
- Less costly to install than most other methods
- Increases flexibility in construction scheduling
- Can be directly added to the RMC truck at job site

**PRODUCT DESCRIPTION**

SUPERSHIELD ADMIXPLUS is a liquid crystalline chemical admixture for waterproofing, protecting and improving the durability of concrete. The proprietary blend of chemicals in SUPERSHIELD ADMIXPLUS reacts with the moisture and the by-products of cement hydration to form a highly resistant crystalline formation that becomes an integral part of the concrete and acts as an impermeable barrier and thus the concrete becomes permanently sealed against penetration of water and other chemicals from any direction. This crystalline structure occurs where moisture is present, so later if cracks form due to settling or shrinkage the incoming water triggers the crystallization process and additional crystals begin to grow. SUPERSHIELD ADMIXPLUS is specifically formulated to meet all modern concrete practices that incorporate additives and other supplementary cementitious materials. For most concrete mix designs adding SUPERSHIELD ADMIXPLUS will have minimal or no effect on setting time.

RECOMMENDED FOR

- Basements
- Concrete Water Tanks
- Tunnels and Subway Systems
- Roof Slab
- Sewage and Water Treatment Plants
- Reservoirs
- Sunken Portion
- Foundations & Elevator pits
- Ground parking structures
- Bridges and Dams

**TECHNICAL DATA**

Product Code	SCA104	
Colour & Appearance	Colourless Liquid	
Compressive Strength	EN 12390 - 3	After 28 days- Strength increase of 5% to 10 % is observed based on the admix ratio
Water Permeability	EN 12390 - 8	Passed
Relative Density	1.08 kg/l @ 25° C	
pH Value	> 10	
Resistance to Chloride Ion	ASTM C1202	No increase in the internal chloride content
Proposed use of chemical: Admixture for waterproofing and protective barrier system for concrete with or without reinforcement.		

Performance characteristics for CE certification according to EN 934-2:2009/A1:2012, 2+

Test type	Standards	Performance
Chloride Ion Content	EN 480-10	≤0.10% by mass
Alkali Content	EN 480-12	≤10.3% by mass
Capillary Absorption	EN 480-5	Tested for 28 days after 90 days curing: test mix ≤ 60% by mass of control mix
Compressive Strength	EN 12390-3	At 28 days: test mix ≥ 85% of control mix
Air Content	EN 12350-7	Test mix ≤ 2% by volume above control mix
Corrosion Behaviour	Contains only substances according to EN934-1 Annex A1	



APPLICATION GUIDELINES

PREPARATION AND MIXING

Dosage: SUPERSHIELD ADMIXPLUS is recommended at a dosage of 1% of cement by weight. Under certain conditions the dosage rate may be between 1-2% depending on the type of concrete required.

SUPERSHIELD ADMIXPLUS can be added to concrete during the batching process at the concrete batching plant or at the construction site to the ready mix truck after the truck arrives at the site.

Note: At the batching plant SUPERSHIELD ADMIXPLUS can be dosed automatically by integrating a dosing pump to the existing PLC controller. To know more information on integrating automatic dosing system contact SUPERSHIELD representatives.

APPLICATION

SUPERSHIELD ADMIXPLUS can be added into the mixing water or directly into the concrete mixer after 50 – 70% of the mixing water has been added. The addition of SUPERSHIELD ADMIXPLUS to dry aggregate or cement is not recommended. To achieve optimum performance a minimum wet mixing time, which is depending on the mixing conditions and the mixer performance, of 2 minutes is recommended. The standard rules of good concreting practice, concerning production as well as placing, are to be followed. Fresh concrete must be cured properly and curing applied as per the relevant standard. Excessive water addition or overdosing may cause bleeding or segregation. Clean all tools and application equipment with water immediately after use. Hardened/ cured material can only be mechanically removed.

SETTING TIME AND STRENGTH

The setting time of the concrete is affected by the chemical and physical composition of ingredients,

temperature of the concrete and climatic conditions. For most concrete mix designs adding the SUPERSHIELD ADMIXPLUS will have minimal or no effect on setting time. Concrete containing SUPERSHIELD ADMIXPLUS may develop higher ultimate strength than plain concrete. Trial mixes should be carried out under project conditions to determine setting time and strength of the concrete.

LIMITATIONS

When incorporating SUPERSHIELD ADMIXPLUS, the temperature of the concrete mix should be above 40°F (4°C). If frozen and/ or if precipitation has occurred SUPERSHIELD ADMIXPLUS may be used after thawing slowly at room temperature and after intensive mixing.

HEALTH AND SAFETY

SUPERSHIELD ADMIXPLUS, contains chemicals, which may cause skin irritation. For personal precaution, protective gloves and goggles are recommended to be worn during handling of this product. If product gets in contact with the eyes, flush immediately with clean water and seek medical assistance if symptoms prolong.

STORAGE

When stored in a dry place in unopened, undamaged original packaging, shelf life is 12 months. Protect from direct sunlight and frost.

PACKAGING

Available in 25 ltr cans, 200 ltr drums and 1000 ltr bulk containers.