



CRYSTALLINE WATERPROOFING FOR CONCRETE - ADMIXTURE

- 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 ADMIX 100 is a chemical admixture for waterproofing, protecting and improving the durability of concrete. The proprietary blend of chemicals in SUPERSHIELD ADMIX 100 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 against water and other chemicals. 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 ADMIX 100 is specifically formulated to meet modern concrete practices that incorporate additives such as fly ash and slag. For most concrete mix designs adding SUPERSHIELD ADMIX 100 will have minimal or no effect on setting time.

Product Selection Guide

Products	Recommended For
ADMIX 100	Suitable for job site mix where no retardation is required
ADMIX 200	Suitable for concrete mixes where normal to mild retarded set is required
ADMIX 300	Suitable for concrete mixes where extended retarded set is required

SUPERSHIELD ADMIX SERIES is designed for typical Portland cement rich concrete and also to meet modern concrete practices that incorporate additives such as fly ash and slag.

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

The information contained herein is based on our long-term experience and the best of our knowledge. We can, however, make no guarantee since for a successful outcome, all circumstances in an individual case must be taken into consideration. Indications of quantities required are only averages which in certain cases might be greater.

**TECHNICAL DATA**

Product Code	SCA101	
Colour & Appearance	Grey Powder	
Compressive Strength	EN 12390 - 3	After 28 days- Strength increase of 5% to 10 % is observed based on the admix ratio
Depth of water penetration	EN 12390 - 8	Passed
Water Permeability	DIN 1048	50 to 60 % reduction
Resistance to Chloride Ion	ASTM C1202	No increase in the internal chloride content

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 ADMIX 100 1% of cement by weight.

Note: Under certain conditions the dosage rate may be between 2-3% depending on the type of concrete required.

SUPERSHIELD ADMIX 100 must be added to the concrete at the time of batching. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment.

READY MIX PLANT - DRY BATCH OPERATION

Add SUPERSHIELD ADMIX 100 in powder form to the drum of the ready-mix truck. Drive the ready mix truck under the batch plant and add the balance of the materials in accordance with standard concrete batching practices. Mix materials for a minimum of 5 minutes to ensure that the SUPERSHIELD ADMIX 100 has been thoroughly dispersed throughout the concrete.

READY MIX PLANT - CENTRAL MIX OPERATION

Mix SUPERSHIELD ADMIX 100 with water to form a very thin slurry (e.g. 15 - 20 lb./6.75 - 9 kg of powder mixed with 3 gallons/ 13.6 litres of water). Pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of the SUPERSHIELD ADMIX 100 throughout the concrete.

READY MIX TRUCK - AT THE JOB SITE

SUPERSHIELD ADMIX 100 can be added into the ready mix truck as a final ingredient at the job site in two different forms (i.e. one as a dry powder and

another as a thin slurry).

Dry Powder: Add the right amount of SUPERSHIELD ADMIX 100 to the drum of the RMC truck slowly, while it is in the mixing mode and mix it for at least 10 minutes to ensure even distribution of the SUPERSHIELD ADMIX 100 throughout the concrete.

Thin Slurry: Mix SUPERSHIELD ADMIX 100 with water to form a very thin slurry (e.g 1 part of water with 2 parts of powder approximately 1 litre of water would be added extra for a cubic meter of concrete. The water content in the slurry can be reduced if required). Pour the slurry into the truck while the truck is in mixing mode and mix it for at least 5 minutes to ensure even distribution of the SUPERSHIELD ADMIX 100 throughout the concrete.

PRECAST BATCH PLANT

Add SUPERSHIELD ADMIX 100 to the aggregates and sand, then mix thoroughly for 2 - 3 minutes before adding cement and water. The total concrete mass should be blended using standard practices.

Notes:

1. It is important to obtain a homogeneous mixture of SUPERSHIELD ADMIX 100 with the concrete. Therefore, do not add dry Admix powder directly to wet concrete as this may cause clumping and thorough dispersion will not occur.
2. Concrete containing the SUPERSHIELD ADMIX 100 does not preclude the requirement for design of crack control, construction joint detailing and measures for repairing defects in concrete (i.e. honeycombing, tie holes, cracks beyond specified limits).

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



APPLICATION GUIDELINES

conditions. For most concrete mix designs adding the SUPERSHIELD ADMIX 100 will have minimal or no effect on setting time. Concrete containing SUPERSHIELD ADMIX 100 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 ADMIX 100, the temperature of the concrete mix should be above 40°F (4°C).

HEALTH AND SAFETY

SUPERSHIELD ADMIX 100 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.

PACKAGING

Available in 25 kg (55.1 lb) Pails and 25 kg (55.1 lb) PE-lined paper bags.



CRYSTALLINE WATERPROOFING FOR CONCRETE - ADMIXTURE

- 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
- Comes with the benefit of normal to mild retardation

**PRODUCT DESCRIPTION**

SUPERSHIELD ADMIX 200 is a chemical admixture for waterproofing, protecting and improving the durability of concrete. The proprietary blend of chemicals in SUPERSHIELD ADMIX 200 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 against water and other chemicals. 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 ADMIX 200 is specifically designed for projects where normal to mild retarded set is required.

Product Selection Guide

Products	Recommended For
ADMIX 100	Suitable for job site mix where no retardation is required
ADMIX 200	Suitable for concrete mixes where normal to mild retarded set is required
ADMIX 300	Suitable for concrete mixes where extended retarded set is required

SUPERSHIELD ADMIX SERIES is designed for typical Portland cement rich concrete and also to meet modern concrete practices that incorporate additives such as fly ash and slag.

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

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**TECHNICAL DATA**

Product Code	SCA102	
Colour & Appearance	Grey Powder	
Compressive Strength	EN 12390 - 3	After 28 days- Strength increase of 5% to 10 % is observed based on the admix ratio
Depth of water penetration	EN 12390 - 8	Passed
Water Permeability	DIN 1048	50 to 60 % reduction
Resistance to Chloride Ion	ASTM C1202	No increase in the internal chloride content

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 ADMIX 200 1% of cement by weight.

Note: Under certain conditions the dosage rate may be between 2-3% depending on the type of concrete required.

SUPERSHIELD ADMIX 200 must be added to the concrete at the time of batching. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment.

READY MIX PLANT - DRY BATCH OPERATION

Add SUPERSHIELD ADMIX 200 in powder form to the drum of the ready-mix truck. Drive the ready mix truck under the batch plant and add the balance of the materials in accordance with standard concrete batching practices. Mix materials for a minimum of 5 minutes to ensure that the SUPERSHIELD ADMIX 200 has been thoroughly dispersed throughout the concrete.

READY MIX PLANT - CENTRAL MIX OPERATION

Mix SUPERSHIELD ADMIX 200 with water to form a very thin slurry (e.g. 15 - 20 lb./6.75 - 9 kg of powder mixed with 3 gallons/ 13.6 litres of water). Pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of the SUPERSHIELD ADMIX 200 throughout the concrete.

READY MIX TRUCK - AT THE JOB SITE

SUPERSHIELD ADMIX 200 can be added into the ready mix truck as a final ingredient at the job site in two different forms (i.e. one as a dry powder and

another as a thin slurry).

Dry Powder: Add the right amount of SUPERSHIELD ADMIX 200 to the drum of the RMC truck slowly, while it is in the mixing mode and mix it for at least 10 minutes to ensure even distribution of the SUPERSHIELD ADMIX 200 throughout the concrete.

Thin Slurry: Mix SUPERSHIELD ADMIX 200 with water to form a very thin slurry (e.g 1 part of water with 2 parts of powder approximately 1 litre of water would be added extra for a cubic meter of concrete. The water content in the slurry can be reduced if required). Pour the slurry into the truck while the truck is in mixing mode and mix it for at least 5 minutes to ensure even distribution of the SUPERSHIELD ADMIX 200 throughout the concrete.

PRECAST BATCH PLANT

Add SUPERSHIELD ADMIX 200 to the aggregates and sand, then mix thoroughly for 2 - 3 minutes before adding cement and water. The total concrete mass should be blended using standard practices.

Notes:

1. It is important to obtain a homogeneous mixture of SUPERSHIELD ADMIX 200 with the concrete. Therefore, do not add dry Admix powder directly to wet concrete as this may cause clumping and thorough dispersion will not occur.
2. Concrete containing the SUPERSHIELD ADMIX 200 does not preclude the requirement for design of crack control, construction joint detailing and measures for repairing defects in concrete (i.e. honeycombing, tie holes, cracks beyond specified limits).

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



APPLICATION GUIDELINES

conditions. SUPERSHIELD ADMIX 200 is designed for projects where normal to mild retarded set is required, the amount of retardation will depend upon the concrete mix design and the dosage rate of admix. Concrete containing SUPERSHIELD ADMIX 200 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 ADMIX 200, the temperature of the concrete mix should be above 40°F (4°C).

HEALTH AND SAFETY

SUPERSHIELD ADMIX 200 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.

PACKAGING

Available in 25 kg (55.1 lb) Pails and 25 kg (55.1 lb) PE-lined paper bags.



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- Permanent with self-healing capabilities - can seal hairline cracks upto 0.5mm
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- Enhances concrete durability & reduces concrete permeability right from start
- Less costly to install than most other methods
- Increases flexibility in construction scheduling
- Comes with the benefit of extended retardation

**PRODUCT DESCRIPTION**

SUPERSHIELD ADMIX 300 is a chemical admixture for waterproofing, protecting and improving the durability of concrete. The proprietary blend of chemicals in SUPERSHIELD ADMIX 300 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 against water and other chemicals. 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 ADMIX 300 is specifically designed for projects where extended retardation is required.

Product Selection Guide

Products	Recommended For
ADMIX 100	Suitable for job site mix where no retardation is required
ADMIX 200	Suitable for concrete mixes where normal to mild retarded set is required
ADMIX 300	Suitable for concrete mixes where extended retarded set is required

SUPERSHIELD ADMIX SERIES is designed for typical Portland cement rich concrete and also to meet modern concrete practices that incorporate additives such as fly ash and slag.

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	SCA103	
Colour & Appearance	Grey Powder	
Compressive Strength	EN 12390 - 3	After 28 days- Strength increase of 5% to 10 % is observed based on the admix ratio
Depth of water penetration	EN 12390 - 8	Passed
Water Permeability	DIN 1048	50 to 60 % reduction
Resistance to Chloride Ion	ASTM C1202	No increase in the internal chloride content

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 ADMIX 300 1% of cement by weight.

Note: Under certain conditions the dosage rate may be up to 2% depending on the type of concrete required.

SUPERSHIELD ADMIX 300 must be added to the concrete at the time of batching. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment:

READY MIX PLANT - DRY BATCH OPERATION

Add SUPERSHIELD ADMIX 300 in powder form to the drum of the ready-mix truck. Drive the ready mix truck under the batch plant and add the balance of the materials in accordance with standard concrete batching practices. Mix materials for a minimum of 5 minutes to ensure that the SUPERSHIELD ADMIX 300 has been thoroughly dispersed throughout the concrete.

READY MIX PLANT - CENTRAL MIX OPERATION

Mix SUPERSHIELD ADMIX 300 with water to form a very thin slurry (e.g. 15 - 20 lb./6.75 - 9 kg of powder mixed with 3 gallons/ 13.6 litres of water). Pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of the SUPERSHIELD ADMIX 300 throughout the concrete.

READY MIX TRUCK - AT THE JOB SITE

SUPERSHIELD ADMIX 300 can be added into the ready mix truck as a final ingredient at the job site in two different forms (i.e. one as a dry powder and

another as a thin slurry).

Dry Powder: Add the right amount of SUPERSHIELD ADMIX 300 to the drum of the RMC truck slowly, while it is in the mixing mode and mix it for at least 10 minutes to ensure even distribution of the SUPERSHIELD ADMIX 300 throughout the concrete.

Thin Slurry: Mix SUPERSHIELD ADMIX 300 with water to form a very thin slurry (e.g 1 part of water with 2 parts of powder approximately 1 litre of water would be added extra for a cubic meter of concrete. The water content in the slurry can be reduced if required). Pour the slurry into the truck while the truck is in mixing mode and mix it for at least 5 minutes to ensure even distribution of the SUPERSHIELD ADMIX 300 throughout the concrete.

PRECAST BATCH PLANT

Add SUPERSHIELD ADMIX 300 to the aggregates and sand, then mix thoroughly for 2 - 3 minutes before adding cement and water. The total concrete mass should be blended using standard practices.

Notes:

1. It is important to obtain a homogeneous mixture of SUPERSHIELD ADMIX 300 with the concrete. Therefore, do not add dry Admix powder directly to wet concrete as this may cause clumping and thorough dispersion will not occur.
2. Concrete containing the SUPERSHIELD ADMIX 300 does not preclude the requirement for design of crack control, construction joint detailing and measures for repairing defects in concrete (i.e. honeycombing, tie holes, cracks beyond specified limits).

SETTING TIME AND STRENGTH

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



APPLICATION GUIDELINES

temperature of the concrete and climatic conditions. SUPERSHIELD ADMIX 300 is specifically designed for projects where extended retardation is required, the amount of retardation will depend upon the concrete mix design and the dosage rate of admix. Concrete containing SUPERSHIELD ADMIX 300 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 ADMIX 300, the temperature of the concrete mix should be above 40°F (4°C).

HEALTH AND SAFETY

SUPERSHIELD ADMIX 300 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.

PACKAGING

Available in 25 kg (55.1 lb) Pails and 25 kg (55.1 lb) PE-lined paper bags.