

Description:

TechnoSeal® Admix is a non-toxic, unique powder form crystalline admixture for waterproofing and protection of concrete. It is a concrete additive being mixed at the time of batching. It forms catalytic crystalline growth within the concrete. TechnoSeal® Admix reacts with the fresh concrete and crystallises inside by forming non-soluble particles that blocks the capillarity network of the concrete structure, reduces concrete permeability by permanently sealing micro cracks (pores/capillaries) and provides an internal crystallization process which seal, waterproof penetration and the effects of deterioration, even under high hydrostatic pressure and protect the concrete structure against water and other aggressive compounds.

In addition to that, TechnoSeal® Admix provides self-healing concrete with the ability to reseal cracks that develop during the lifetime of the concrete. Thus, TechnoSeal® Admix provides an internal crystallization process which seal, waterproof and protect the concrete structure against water and other aggressive compounds. TechnoSeal® Admix is compatible with all commonly used workability admixtures (e.g. superplasticizers, retarders) and mix design formulations (trial mixes recommended prior to casting).

Application Includes:

TechnoSeal® Admix is suitable for any type of concrete element that is constantly or temporarily in contact with water, such as:

- Waterproofing of water tanks, reservoirs, swimming-pools & fountains.
- Basements and below-grade structures subjected to positive or negative water pressure.
- Waterproofing and protection of concrete foundations, retaining walls and foundation slabs.
- Concrete structures subject to aggressive media such as marine environment, cooling towers, industrial silos, thermal plants, etc.
- All kind of hydraulic jobs such as dams, water channels, waste water treatment plants, sewage pipelines, etc.
- Waterproofing tunnels, shafts, underground structures.
- Terrace, Non Towers Deck.

Features:

- Replaces all membranes.
- Virtually eliminates water penetration through concrete.
- Will stop water under high hydrostatic pressure.
- Reduces cracking by up to 60%.
- Will self-heal new hairline cracks.
- Impart an internal waterproofing by forming non-soluble crystals, becoming structural part of the concrete.
- Very high chemical resistance to aggressive soil salts, marine water, etc.
- Can self-heal static hairline cracks up to 0.5 mm. Allows water vapour diffusion of concrete.

- Allows concrete to breathe. Non-toxic, solvent-free and eco-friendly.
- Exceptional durability at 5°C to 50°C.
- Protection of concrete against certain aggressive chemicals including chloride attack to steel reinforcing.
- Resists extreme hydrostatic pressure from either positive or negative surface of the concrete slab
- Able to achieve waterproofing tightness with minimum 300 mm thickness of TechnoSeal® Admix concrete depth
- TechnoSeal® Admix complies with the requirements of AS 1478.1-2000, Chemical Admixture for Concrete, For Special Purpose Normal-Setting (Type SN) Admixture.
- Added to the concrete at time of batching and therefore is not subject to climatic restraints and Increases flexibility in construction scheduling.

Typical Properties:

Appearance	Grey coloured free flowing powder
VOC	0%
Self-healing of static cracks	Max. 0.5 mm
Compliances	Confirms to- ASTM C494 Type S
Water impermeability acc.	EN 12390-8: < 232 psi < 232 psi
-Positive side: - Negative side:	
Bulk Density, gm/cc	Approx. 1.4
pH of fresh mixed concrete	12.00
pH of Hardened Concrete	13.00

Direction of use:

Mixing:

TechnoSeal® Admix 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. The following are some typical mixing guidelines. For more detailed information on dosing procedures contact your STERLING TECHNOSTRADE's representative.

Ready Mix Plant – Dry Batch Operation

- Add TechnoSeal® Admix in powder form to the drum of the ready-mix truck.
- Drive the truck under the batch plant and add 60% - 70% of the required water along with 136-227 kg of aggregate.
- Mix the materials for 2-3 minutes to ensure the TechnoSeal® Admix is distributed evenly throughout the mix water.
- Add the balance of materials to the ready-mix truck in accordance with standard batching practices.

Precast Batch Plant

Add TechnoSeal® Admix to the rock and sand, then mix thoroughly for 2-3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

Ready Mix Plant - Central Mix Operation

Mix TechnoSeal® Admix @ (0.8-1.2%) by weight of cementitious material. Pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement, sand and water should be batched and mixed in the plant as per mix design. Pour the concrete into the truck and mix for at least at least (3-5) minits before laying of concrete.

Setting Time and Strength

The setting time of concrete is affected by the chemical and physical composition of ingredients, temperature of the concrete and climatic conditions. Retardation of set may occur when using TechnoSeal® Admix. The amount of retardation will depend upon the concrete mix design and the dosage rate of TechnoSeal® Admix. However, under normal conditions, TechnoSeal® Admix will provide a normal set concrete. Concrete containing TechnoSeal® Admix may develop higher ultimate strengths than plain concrete. Trial mixes should be carried out under project conditions to determine setting time and strength of the concrete. Concrete treated with TechnoSeal® Admix should be placed and finished in accordance with good concrete practices.

Dosage Rate:

(0.8-1.2)% by weight of cement. Consult with STERLING TECHNO TRADE's Technical team for assistance in verifying the appropriate dosage rate and for further information regarding enhanced chemical resistance and optimum concrete performance for your project.

Special considerations:

- When incorporating TechnoSeal® Admix the temperature of the concrete mix should be above 4°C.
- Placing & curing of concrete as per standard engineering practice or as instructed by the engineer in charge.
- In most cases 7 days of water curing is recommended.
- Curing membranes as per ASTM C-309 or ASTM C-1315 may be used.
- Please consult our technical representative for finalization of consumption and process.

Storage:

TechnoSeal® Admix must be stored dry at a minimum temperature of 7°C. Shelf life is one year from the date of manufacturing when stored under proper conditions.

Packaging:

TechnoSeal® admix is supplied in 30 Kg HDPE bag packing.

Precaution & Limitations:

TechnoSeal® Admix is an effective system for rigid structures only and may not reliably seal moving cracks and joints that experience variable loading or repeated movement. In case the workability / slump is lower than the desired specification, then one may need to add high range water reducer to achieve the required slump. Addition of additional water on the batch process card must be approved by the QA authority. The temperature of the concrete mix should be above 5°C. Do not exceed the specified water/cement ratio.

Health and Safety instructions:

TechnoSeal® Admix is non-toxic. Gloves and goggles should be worn. Any splashes to the skin or eyes should be washed off with clean water. In the event of prolonged irritation, medical advice should be sought. Should use a dust mask while handling the powder. Protect yourself and others on the jobsite. Consider property in proximity of the application area to prevent loss or damage. Protect your jobsite from unauthorized persons.

Store all materials and equipment safely and out of reach of children and animals. Observe container labels, SDS, applicable laws and regulations and all instructions before using the product and equipment. In case one of the components comes in contact with the skin, wash thoroughly with soap and water. Provide adequate ventilation in volume and pattern in working area.

Additional information:

Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

*Separate datasheet are available on these products.

DISCLAIMER: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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