



Lease Life
to Man-Made
Structures

SUPERSHIELD

MULTISEAL

Self-healing Multifunctional Crystalline Waterproofing
and Protective Treatment for Concrete



PRODUCT DESCRIPTION

SUPERSHIELD MULTISEAL is a unique water-based, environmentally friendly waterproofing and protective treatment for concrete. With a single application SUPERSHIELD MULTISEAL guarantees the long-term sustainability and durability of concrete structures. The protective capabilities of SUPERSHIELD MULTISEAL are a combination of hydrophobic, icephobic, and permeability resistant characteristics that are made possible through the presence of Dynamic SHIELD crystals that dynamically respond to environmental changes experienced by concrete structures, particularly those subjected to periodic wet and dry cycles, such as flyovers, bridges, roads, and similar infrastructure. MULTISEAL self-heals concrete cracks, effectively addressing moisture infiltration even on the negative side. It protects against harsh environmental conditions and aggressive chemicals, making it a unique and highly versatile solution.

RECOMMENDED USES

- Airport runways and parking areas
- Bridges and highway structures
- Flyovers
- Tunnels
- Multi-story car park decks and structures
- Seaports
- Marine structures
- Buildings
- Walkways
- Effluent treatment plants



FEATURES AND BENEFITS

- MULTISEAL is easy to apply; just spray with a low-pressure sprayer
- It is water-based, non-toxic, and totally environment-safe. It is certified for use in potable water bodies
- Provides repellence and Multifunctional crystallization
- Single application and its permanently active
- Self-healing cracks up to 0.5 mm, and waterproof cracks up to 1.2 mm
- Provides permanent internal waterproofing and moisture blocking from both positive and negative sources
- Protects against damage caused by repeated freezing and thawing cycles
- Provides excellent repelling properties against water, jet fuel, and oil penetration from the surface
- High resistance against chloride ion penetration and thereby protects reinforcing steel bars against corrosion
- High chemical resistance
- Reduces alkali silica reactions, thus eliminating silica dusting
- Allows concrete to breathe
- Enhances the adhesion properties of sealants and coatings
- Prevents concrete scaling and premature cracking on concrete surfaces
- No appearance changes after the treatment
- No further protection is required after the treatment like protective plastering
- Prevents the growth of algae and other vegetation



TECHNICAL DATA

General Characteristics		
PROPERTY	VALUE	
Color and Appearance	Colourless Liquid	
Density	1.14 g/cm³	
pH Value	9.2	
Performance Characteristics		
TEST NAME	TEST METHOD	PERFORMANCE
Depth of Penetration	EN 14630	Class II > 10mm
Water Permeability	DIN 1048	Treated samples showed 113% better performance than untreated
Resistance to Chloride Ion	ASTM C1202-3	Treated samples showed 112% better performance than untreated
Water Absorption and Resistance to Alkali	EN 13580	Absorption ratio <7.5 % compared with untreated specimen <10% after immersion in alkali solution
Loss of mass after freeze-thaw test	EN 13581	Loss of mass 20 cycles later than in non- impregnated samples
Drying Rate Co-efficient	EN 13579	Class I > 30%
Chloride Ion Content	EN 480-10	≤ 0.10% by mass
Dangerous substances	EN 12350-7	Complies with EN 1504-2, 5, 3
Potable Water Test	D.Lgs. 31/2001	Complies with the parameters



APPLICATION GUIDELINES

Surface Preparation

SUPERSHIELD MULTISEAL can be applied on a damp surface, but the surface should be predominantly dry, as absorption of the material from the surface would be better on a dry substrate. Concrete surfaces must be clean and sound before the application of SUPERSHIELD MULTISEAL. Proper cleaning opens the surface pores and capillaries to enhance the penetration process. The use of compressed air or brushing is recommended to remove all loose particles and dust from the surface. The use of special concrete cleaning agents may be necessary for areas contaminated with oil.

Mixing

Agitate SUPERSHIELD MULTISEAL in a drum or pail to assure proper dispersion of solids. SUPERSHIELD MULTISEAL is supplied in ready-to-apply form and should not be diluted by any means.

Application

SUPERSHIELD MULTISEAL should be applied in a single coat only through spraying or brushing. For large-scale applications, it is recommended to spray the product using a heavy-duty commercial sprayer. Do not apply SUPERSHIELD MULTISEAL on exterior substrates if precipitation is forecast within two hours of coating completion. If precipitation occurs during application, discontinue the application process immediately; however, the already treated area does not require any protection or re-application.

Coverage

It is recommended to apply SUPERSHIELD MULTISEAL at a dosage rate of 4.9 m²/Lit (200 ft/gal) in one coat. The coatings should be applied evenly, and the substrate should be covered entirely with the coating.

Appearance After Application

The concrete treated with SUPERSHIELD MULTISEAL may turn dark for an initial period but will restore to its original color once dried out completely. Excess spraying of the material may form white powder on the surface after drying, and if necessary, this can be washed off. Special measures are not required for the disposal of the wash water as the product is non-toxic.

Curing

The concrete surface treated with SUPERSHIELD MULTISEAL should be allowed to cure at 23.9°C (75°F) for one hour before being opened for traffic.

Marking And Coatings

The SUPERSHIELD MULTISEAL treated concrete substrate can be marked or coated after 48 hours at 23.9°C (75°F).

LIMITATIONS

SUPERSHIELD MULTISEAL must not be applied if the temperature falls below 5°C or if it is raining. As with all impregnation materials and processes, the surface to be treated must be free from any contamination that might reduce uptake of the impregnate. The concrete substrate that is to be treated with SUPERSHIELD MULTISEAL should be a minimum of 7 days old.

HEALTH AND SAFETY

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



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STORAGE

SUPERSHIELD MULTISEAL must be stored at room temperature. Cold temperatures may cause the product to crystallize. When stored in a dry place in unopened, undamaged original packaging, the shelf life is 12 months. Do not allow the product to freeze. Repeated freezing and thawing might cause damage to the product.

PACKAGING

Available in 25-Litre carboys , 200-Litre drums and 1000 ltr IBC.

WARRANTY

Supershield warrants that the products manufactured by it shall be free from material defects and comply with the specifications given in their respective technical data sheets. Should any of the products be proven defective, the liability of Supershield shall be limited to the replacement of the product, and Supershield shall in no case be liable otherwise or for incidental or consequential damages. No other warranties, express or implied, shall apply, including any warranty of merchantability or fitness for a particular purpose. The user shall determine the suitability of the product for his intended use and assume all risks and liabilities in connection therewith. Supershield reserves the right to change the properties of its products without notice.