

X-Shield UraSeal S

High performance UV and chemical resistant coating for concrete and steel

Product Description

X-Shield UraSeal S is a high performance polyurethane coating that is also decorative and suitable for use in a wide range of applications. The product is also available in a high build version, X-Shield UraSeal HB. The product can be applied to a wide variety of substrates including concrete, masonry, steel and wood.

Composition

X-Shield UraSeal S is a solvent dispersed aliphatic polyurethane resin containing fillers, pigments, adhesion promoters and wetting agents.

Advantages

- Resistant to UV
- Abrasion resistant
- Resistant to wide range of chemicals
- Waterproof
- Long pot life
- Available in wide range of colors
- Easy to clean and maintain.

Uses

- Protection of marine structures
- Protection of industrial structures
- Protection of transportation structures
- Production of decorative finishes
- Floor and wall coating
- UV resistant top coat for epoxy and aromatic PU coatings

Laboratory Test Data

Property	Typical Results
Liquid water permeability	<0.1kg/m ² .h ^{0.5}
Carbon dioxide permeability	>300m ^{air}
Reduction in water absorption	>99%
Abrasion Resistance (ASTM D4060)	>75mg loss
Chloride ingress after 1000 hrs. salt spray testing	Nil
Elongation	>200%

Application Properties

Wet film thickness	Colors: 120 microns per coat Clear: 110 microns per coat
Dry film thickness	Colors: 75 microns 2 coats Clear: 60 microns 2 coats
Solids Content by volume	Colors: 63% ± 2 Clear: 27% ± 2
Specific gravity	Colors: 1.25 ± 0.05 Clear: 0.95 ± 0.05
Pot life	45 min at 25C (86F)
Touch dry	2 to 3 hours at 30C (86F)
Recoat time	6 to 24 hours at 30C (86F)
Full cure	7 days at 30C (86F)

Volatile Organic Content

VOC = 390 g/L

Chemical Resistance

X-Shield UraSeal S has good resistance to the following chemicals:

- 5% Acetic acid
- 20% Ammonia
- 80% Citric acid
- 100% Hydrogen Peroxide
- 50% Phosphoric acid
- 24% Sodium Hydroxide
- 5% Aqueous starch solution
- 10% Tartaric acid
- Bleach
- Diethyl ether
- Ethanol
- Milk
- Oleic acid
- Toluene
- Xylene

Color

Standard: Grey, white, green, brick red, beige and clear
Other colors available on request subject to a minimum order.

Theoretical Coverage

Colors: 6.6m² per Kg per coat.

Clear: 9m² per liter per coat.

Actual coverage will depend on wastage and surface profile and can be up to 20% or more higher than theoretical coverage.

Packaging

X-Shield UraSeal S: 5Kg pack.

X-Prime SF : 5 & 15 liter packs

X-Prime MT100: 5 & 15 liter packs

Shelf Life

12 months when stored below 30C (86F) under shade in a dry environment.

Installation Guidelines

X-Shield UraSeal S should be applied by experienced coating crews. NCC X-Calibur provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting work. The information below is a summary intended for guidance only.

Surface Preparation

The substrate must be structurally sound. Loose or unsound concrete should be removed and made good. Surfaces must be entirely free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits. The surface should be prepared by light grit blasting or high pressure water blasting to produce a lightly exposed aggregate surface. Any bug holes should be filled with X-Shield BugFill.

Priming

Priming is not normally required when using X-Shield UraSeal S Clear. For the colors prime the surface using X-Prime SF or X-Prime MT100 applied at 6 to 10 m² per liter and allow to dry before applying X-Shield UraSeal S. Ensure that no ponding of the primer occurs and that it is not applied too thick. If the primer is left to dry for more than 24 hours the surface will have to be re-primed. Porous substrates may require a two coat application.

Mixing

Mix X-Shield UraSeal S using the following technique. Add the hardener 'Part B' into the base 'Part A' and mix using a slow speed drill (500 rpm) with an X-Shield Coating Mixer Paddle for 3 minutes or until both components have fully dispersed and are uniform in color. Be sure to rotate the mixer throughout the drum. Mix only full packs.

Application

Apply in two coats thickness using brush, roller or airless spray. When using airless spray, tip size should be

0.015" to 0.0018" at a pressure of 2200psi. Recoat after 12 to 24 hours at 30C (86F). Clean equipment using X-Shield Solvent S.

Limitations

Will not accommodate movement cracks.

Do not use in permanently immersed conditions.

Do not be apply within 3C of the dewpoint or if it is within 5C of the dewpoint and dropping.

Do not apply below 5C (41C).

Avoid excessive application.

Avoid skin contact.

Do not discard into the water system.

Apply only on to slabs that have a waterproofing system installed in order to prevent blistering due to osmosis.

Health and Safety

This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website www.ncc.com.eg.

Authorized Technical Specialist

Please note that only NCC X-Calibur Authorized Technical Specialists ('ATSS') are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product. Visit www.ncc.com.eg for a full list of NCC X-Calibur ATSSs.

Datasheet Validity

NCC X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on www.ncc.com.eg to ensure you have the latest version.

Warranties

NCC X-Calibur supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. NCC X-Calibur does not warrant or guarantee the installation of the products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to NCC X-Calibur in writing within five working days of being detected. NCC X-Calibur Construction Chemicals **makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.** NCC X-Calibur Construction Chemicals shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.