TECHNICAL DATA SHEET

ShieldPrime CA

Epoxy Varnish Sealer for Concrete Floors

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Product Description

ShieldPrime CA is a varnish epoxy sealer for floors. Its main properties are:

- ✓ To stabilize and strengthen uneven surfaces.
- ✓ Excellent penetrative capability.
- ✓ Binder for mortars.
- ✓ Fireproof
- ✓ CE Marking product

Main Applications

As a binder and sealer for new and old concrete surfaces prior to the application of self-levelling mortars for floors, float applied mortars and coloured silica systems. It can also be used as a primer for levelling and filling and coving screeds.

Properties

Finish	Gloss
Colour	Colourless
Components	2 Actual formulation: 7F141.0000 + 7F142.9999 New formulation: 7F141.0001 + 7F142.9990
Mixing Ratio (by weight)	Actual Formulation / New Formulation Resin 7F-141: 4 parts / 2.5 parts Cure 7F-142: 1 part / 1 part
Pot Life of the Mixture	Actual formulation: 30 - 45 minutes at 20ºC New formulation: 20 - 30 minutes at 20ºC Since the pot-life is limited and shortened by high temperatures, do not mix more material than will be used in pot-life period. Otherwise, it must be careful to place the reaction product outdoors or in well ventilated areas.
Volume Solids	100% approx.
Recommended Dry Film Thickness	300 – 500 µm Depending on the surface absorption when applied as primer / sealer.
Specific Gravity	Actual formulation: 1.06 g/mL New formulation: 1.08 g/mL
Theoretical Coverage	See recommended paint systems. Allow for application losses, surface irregularities, etc.
Drying Time	At 20ºC and 250 µm: To touch: 3 hours Total dry: 24 hours Recoating: Min: 8 hours – Max: 24 hours Drying times depend on air temperature, surface temperature and ventilation. If you apply a self-leveling mortar finish, it will be necessary to guaranty no porosity on the base. If case of exceeding the maximum recoating time, it will be necessary to make a mechanical abrasion of the surface to guarantee a good adhesion between layers.

Surface Preparation

Concrete must be left for at least 28 days to be fully cured. Remove the laitance, old paint, and any other contaminants by grit blasting. The floor humidity must not exceed 4% (measured in depth with an equipment like "Tramex"). The minimum tensile strength must be greater than 1.5 N/mm² (15.3 kg/cm²).

Apply over clean dry surfaces with sufficient rugosity, achieved by grit blasting or other mechanical abrasion tools.

Application & Paint Systems

Add the hardener to the resin and stir for 5 minutes. In enclosed areas there must be good ventilation during application and drying until the solvents have evaporated.

Ambient Application Conditions:

- Temperature: 10 - 45ºC
- Relative humidity: 0 - 85%
- Minimum surface temp.: 3ºC above dew point
- Support humidity: less than 4% in depth (with "Tramex" equipment or similar)

Application Methods:

Trowel, spatula, brush, and roller.

To be effective in sealing porosity, it is recommended to apply by trowel.

Cleaner:

7S-902.000 (CP-40); 52-510.0000 (Dil. Industrial)

Number of Coats:

It depends on the application method and support porosity and regularity.

As Primer / Sealer:

Apply by roller, brush, trowel, or spatula to achieve a spread rate of 0.35 – 0.60 kg/m². Depending on absorption of substrate and its porosity, it may be necessary to apply supplementary coats to completely seal the substrate. On irregular substrates, it is recommended to apply previously a thin mortar by trowel.

As a Fine Mortar (applied by trowel or spatula):

Mix 1 part by weight of ShieldPrime CA with 0.5 – 0.6 part of a mix of Quartz G300 and Quartz Powder G50 (1/1). The sealer and silica weight relation depends on the roughness of surface.

The applicator should decide which will be the most appropriate proportions to ensure a complete sealing of the support. It may be necessary to apply an additional coat of ShieldPrime CA.

Consumption: 1 kg /m² /mm approx. (depends on surface irregularities and trowel type)

To Repair Joints and Cracks:

Mix 1 part of ShieldPrime CA (mixed product) with 6 – 9 parts of Quartz G800+Quartz G450+Quartz G300 and applied by trowel. To repair small cracks, it is recommended to apply ShieldPrime CA with woven fibre glass "Fast Tela – Tela Pavimentos".

Coverage: 2.5 – 3 kg /m² /mm

Covering Screeds:

Sealer: First apply one coat of ShieldPrime CA.
Coverage: 0.2 – 0.3 g/m²

Mortar: After applying the sealer, prepare the ShieldPrime CA with 2% by weight of ShieldPrime Thickener Additive. Prepare a mortar from this mixture with Quartz G300 in the proportion between 1/7 and 1/8 by weight of coating / silica and apply the filler with a suitable trowel.
Coverage of coating: 0.23 – 0.25 kg/m²/mm
Coverage of the silica: 2.1 – 2.2 kg/m²/mm

Finishes: Solvent free epoxy paints and varnishes as a coating or mortar topcoat. Before applying those products, please see the technical data sheets.

Additional Information

Drying Mechanism – By chemical reaction between components

Volatile Organic Compounds (VOC)

UE limit for the product (cat. A/j): 500 g/L

Maximum VOC content 59 g/L*

* The VOC value shown above refers to a ready to use product, as tinted, thinned, etc, in accordance with our recommendations. We are not responsible for products obtained by mixing products with are different from those we have recommended, and we must draw attention to the responsibility of anyone involved within the supply chain not to infringe Directive 2004/12/CE.

Flashpoint (Closed Container)

- Resin: higher than 96ºC
- Hardener: higher than 100ºC
- Cleaner: 4ºC (7S-902.0001)
  lower than 5ºC (52-510.0000)

Supply Form	Actual Formulation	New Formulation
Resin	8 kg	7.5 kg
Hardener	2 kg	3.0 kg

Shelf-life

3 years, when stored in original containers, indoors, between 5 and 40ºC.

Observations

a) To produce a homogeneous mixture of the 3 components, use a flameproof electric or compressed air mixer. Firstly, homogenize the resin and cure, then add the silica and continue stirring for around 5 minutes to obtain a homogeneous product. Finally, clean the equipment using the cleaning solvent.

b) Due to its low density, thickener must be added under a low-speed mechanical stirrer.

Homologations & Certificates

Fire reaction classification according to European Norm EN 13501-1 B_{fl}-s1 (fire reaction with low smoke emission).

CE Marking

CE Marking of this product is the evidence given by ShieldCrete® International that this product is subject to the provisions of Community Directives of the Construction Products that are applicable with European Regulation nº 305/2011 on March, 9 of 2011 and the European Standard EN 13813. "Screed material and floor sounds – Sound material - Properties and requirements". This product conforms to the requirements of Annex ZA of that that standard.

CE

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EN 13813

Continuous floor coating
Declaration of performance: CE-7F140

Classification	SR – B_{fl}-s1 – B1,5
Traction Adherence	> 1.5 N/mm²
Fire reaction	B_{fl} -s1

Health, Safety, and the Environment

- ✓ Protect the eyes and skin from contact,
- ✓ Gloves, goggles, and appropriate clothing should be worn.
- ✓ Keep out of the reach of children.
- ✓ Use only in well ventilated areas.
- ✓ Do not empty into drains.
- ✓ Keep the container properly sealed and stored in the correct place.
- ✓ Take correct measures when transporting the product to avoid any accidents that could rupture the can or cause damage to the packaging.
- ✓ Ensure that the container is correctly stacked in a safe area.
- ✓ Do not store or use the product in extreme temperature conditions.
- ✓ Always take account of the appropriate legislation relating to the environment and Health and Safety at Work.

For more information it is essential to read the label on the container and the Material Safety Data Sheet of this product, its components and all complementary products referred on Technical Data Sheet.

DISCLAIMER

The information provided herein, especially recommendations for the usage and the application of our products, is based upon our knowledge and experience. Due to different materials and equipment used, as well as varying working conditions and environments beyond our control we strictly recommend carrying out intensive trials to test the suitability of our products regarding the required processes and applications. This data sheet is provided free of charge, and we do not accept any liability regarding the above information or regarding any verbal recommendation, except for cases where we are liable of gross negligence or false intention.