

Strongcoat UN101

Epoxy primer, levelling mortar, intermediate layer, repair-mortar, and floor screed



DESCRIPTION

Strongcoat UN101 is a two component multi-use epoxy resin. It can be used as a primer, in addition, it can be mixed with different filler gradations to be used as a levelling mortar, self-levelling intermediate layer, repair mortar or floor screed.

APPLICATIONS

- » Primer: over concrete and cementitious floors and epoxy mortars.
- » Repair mortar: as a patching or a levelling mortar.
- » Flooring underlayment: as a self-levelling intermediate layer or a floor screed.
- » Strongcoat UN101 can be overcoated with Strongcoat UN201 decorative and protective epoxy flooring systems.

ADVANTAGES

- » Good penetration.
- » Excellent adhesion.
- » Can be used for multiple applications.
- » Highly durable.
- » Strongcoat UN101 screed system can be used in freezer rooms for temperatures down to -25°C.

SYSTEM COMPONENTS

A) For use as a primer:

Primecoat: 1 - 2 coats of Strongcoat UN101

B) For use as a low thickness levelling mortar (surface roughness < 1 mm)

Primecoat: 1 - 2 coats of Strongcoat UN101
Levelling mortar: 1 coat of Strongcoat UN101 + quartz sand (0.1 - 0.3 mm)

C) For use as a medium thickness levelling mortar (surface roughness up to 2 mm)

Primecoat: 1 - 2 coats of Strongcoat UN101
Levelling mortar: 1 coat of Strongcoat UN101 + quartz sand (0.1 - 0.3 mm)

TECHNICAL PROPERTIES @ 25°C:

Mixed density: (neat resin)	1.5 ± 0.1 g/cm ³
Solids content:	100%
Foot traffic:	After 24 hr
Full cure:	7 days
Compressive strength: ASTM C579 BS 6319-2	≥ 50 MPa @ 7 days Screed (filled 1:8)
Flexural strength: ASTM C580	≥ 20 MPa @ 7 days Screed (filled 1:8)
Tensile strength: BS 6319-7	≥ 8 MPa @ 7 days Screed (filled 1:8)
Bond strength on C25/30 concrete: EN 1542	≥ 2.5 MPa (substrate failure)
Shore D hardness: ASTM D2240	≥ 80
Impact resistance: ISO 6272-2 (modified)	Pass @ 10 N.m (no cracks or peel)
VOC: ASTM D2369	< 50 g/ltr

D) For use as a self-levelling intermediate layer (1.5 to 3 mm)

Primecoat: 1 - 2 coats of Strongcoat UN101
Levelling mortar: 1 coat of Strongcoat UN101 + quartz sand (0.1 - 0.3 mm)
Optional Antislip Aggregate #2 or #3, and seal with Strongcoat UN201 smooth roller coating.

E) For use as a floor screed (15 - 20 mm thickness) or repair mortar

Primecoat: 1 - 2 coats of Strongcoat UN101
Bonding key: 1 coat of Strongcoat UN101
Screed: 1 coat of Strongcoat UN101 + suitable sand mixture (to be applied when the bonding key layer is still tacky)



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COVERAGE				
Component	Mixing Ratio Mixed resin : Sand	Quartz Sand Gradation	Coverage Rate	Thickness
A) Primer	1 : 0 (no sand required)	-	0.38 - 0.60 kg/m ² /coat	250 - 400 microns/coat
B) Low thickness levelling mortar (surface roughness < 1 mm)	1 : 0.5	0.1 - 0.3 mm	1.8 kg/m ² /mm	Depending on substrate surface roughness
C) Medium thickness levelling mortar (surface roughness up to 2 mm)	1 : 1	0.1 - 0.3 mm	1.95 kg/m ² /mm	Depending on substrate surface roughness
D) Self levelling intermediate layer	1 : 1 Optional: for an anti-slip finish, broadcast Antislip Aggregate #2 or #3 and seal with Strongcoat UN201 smooth roller coating	0.1 - 0.3 mm	1.95 kg/m ² /mm and 4 kg/m ² for Antislip Aggregate #2 or #3	Smooth finish: 2 mm Anti-slip finish: depending on Antislip Aggregate used
E.1) Bonding key	1 : 0 (no sand required)	-	0.40 - 0.64 kg/m ²	265 - 425 microns
E.2) Screed/repair mortar	1 : 8	Suitable sand gradation* (as note below)	2.0 kg/m ² /mm	15 - 20 mm

* Note: the following is a recommended quartz sand gradation for layer thickness of 15 - 20 mm:

20 parts by weight (pbw) quartz sand 0.1 - 0.3 mm

30 parts by weight (pbw) quartz sand 0.1 - 0.7 mm

50 parts by weight (pbw) quartz sand 0.5 - 1.0 mm

Note : the maximum grain size shall not exceed 1/3 of the floor screed thickness, grain shape should be taken into consideration when selecting the best suitable quartz sand gradation.

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METHOD OF USE

SUBSTRATE PREPARATION

Concrete substrates should be fully cured and achieve a minimum compressive strength of 25 MPa and a minimum pull-off strength of 1.5 MPa.

The concrete substrate should be below 75% RH and have less than 4% moisture content. Alternatively, Strongcoat DPM should be used after consulting with DCP Technical Department.

SURFACE PREPARATION

Concrete surfaces must be degreased using degreasing products, torching or any other suitable method which assures the surface is free from any oil traces.

Concrete surfaces are to be mechanically prepared to remove laitance and achieve a flat surface, grit blasting or surface profiling equipment are preferred. Acid etching can be used after consulting with DCP Technical Department.

Surface defects such as voids and blowholes should be repaired before application. Consult DCP Technical Department for the best repair material.

Surfaces must be free of any dust or loose particles before product application. Use suitable methods like vacuuming or sweeping.

If possible, apply the product on a small test area before actual application to check for any problems with the surface preparation.

MIXING

Base: Hardener mixing ratio = 86 : 14 (by weight)

Prior to mixing, stir individual components of Strongcoat UN101. Add the Strongcoat UN101 hardener to the base and using a jiffy-type mixer attached to a slow running electric drill, mix for approximately 2 minutes.

Once the Strongcoat UN101 hardener and base have been mixed, transfer the entire contents into a Casco or Creteangle-type mixer, taking care to ensure that the bottom and sides are thoroughly scraped.

Start the mixer and transfer to it the entire contents of the Strongcoat UN101 quartz sand if necessary, taking care to ensure that these are completely dry and lump-free. Continue mixing for approximately 2 minutes.

Note: Never mix Strongcoat UN101 by hand as this could lead to areas of uncured material.

APPLICATION

A) Primer

Strongcoat UN101 can be applied using a brush, roller or squeegee to obtain a continuous primer coat. If needed, apply an additional coat of Strongcoat UN101, and allow to dry before the primer is covered with other flooring systems.

B & C) Leveling mortar

Apply Strongcoat UN101 onto the primed surface as a levelling mortar using a squeegee or a trowel to the required thicknesses.

D) Self-leveling intermediate layer

Pour the mixed material onto the primed surface and spread using a trowel or rake at the required thickness and allow to attain a smooth finish.

While still wet, thoroughly spike roll Strongcoat UN101 to help eliminate the entrapped air. If an anti-slip finish is required, while the self-levelling mortar is still wet, broadcast with Antislip Aggregate #2 or #3 to excess and wait until it gets dry, then remove excess aggregate.

Seal the system with Strongcoat UN201 smooth roller coating. The coating can be applied using a roller or brush at the required thickness.

E) Floor screed/ repair mortar

Apply Strongcoat UN101 bonding key onto the primed surface using a brush, roller or squeegee.

While the bonding key is still tacky, apply Strongcoat UN101 evenly using a trowel at the required thicknesses. The material should be tamped well in place and finished with a steel trowel to achieve the required smoothness.

CLEANING

Strongcoat UN101 can be removed by DCP Solvent prior to setting.



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PACKAGING

Option 1:

Base: 25.7 kg.

Hardener: 4.3 kg.

Base and hardener: 30 kg.

Option 2:

Base: 220 kg drum.

Hardener: 37 kg drum.

Base and hardener: 1 drum (220 kg) base and 1 drum (37 kg) hardener = 275 kg.

Option 3:

Base: 220 kg drum.

Hardener: 110 kg drum.

Base and hardener: 3 drums (220 kg) base and 1 drum (110 kg) hardener = 770 kg.

Contact DCP for the proper quartz sand packaging details based on the flooring system required.

STORAGE

Store in a dry area out of direct sunlight at temperatures between 5°C and 35°C.

Strongcoat UN101 has a shelf life of 12 months from date of manufacture if stored in proper conditions and unopened packs.

If these conditions are exceeded, contact DCP Technical Department for advice.

CAUTIONS

HEALTH AND SAFETY

Strongcoat UN101 should not come in contact with skin and eyes.

In case of accidental splashes to the eyes, rinse thoroughly with clean water and seek medical advice. Suitable protective gloves and goggles should be worn.

Do not use solvent to clean Strongcoat UN101 from skin.

For further information, refer to the Material Safety Data Sheet.

FIRE

Strongcoat UN101 is nonflammable. DCP Solvent is flammable. Ensure adequate ventilation. Do not use near a naked flame and do not smoke during use.

Flash Point:

DCP Solvent: 37°C.

MORE FROM DON CONSTRUCTION PRODUCTS

A wide range of construction chemical products are manufactured by DCP which include:

- » Concrete admixtures.
- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.



Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.