



FONDO SL

Bi-component solvent-free anchoring base coat

CE marking:

- EN 1504-2 (C) - Principles: PI-MC-PR-IR
- EN 13813 - Designation: SR-B2.0



TECHNICAL SPECIFICATIONS



FIELD OF APPLICATION



APPLICATIONS



Description

FONDO SL is a bi-component product formulated with epoxy. Component A is a mix of functionalised pre-polymers with low molecular weight and additives. Component B is a mix of co-polymerisation polyamines.

FONDO SL, mixed and ready-to-use, it is highly fluid, self-levelling and has a high capacity to wet and impregnate the treated surfaces.

FONDO SL can be applied with a steel trowel, roller or block brush on any porous support.

FONDO SL is designed to harden within roughly 6 hours from laying.

The product can be applied even twice a day to accelerate the completion of resin floors.

To maximise the curing speed, FONDO SL is made in two versions (SUMMER and WINTER), to be chosen on the basis of the work temperature.

In the first 48 hours after application, FONDO SL makes the surface adhesive for the anchoring of the subsequent treatments with epoxy resins or other compatible type.

Once cured, FONDO SL forms a very hard film that adheres firmly to the surface.

The adhesion force is such that it causes the cohesive fracture of the concrete during the PULL-OFF TEST.

CE marking

► EN 1504-2

FONDO SL fulfils the principles defined in the EN 1504-9 standard ("Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and evaluation of conformity. General principles for use of products and systems") and to the requirements of the EN 1504-2 standard ("Protection systems for concrete surfaces") for the following class:

→ PI-MC-IR

- For Principle 1 (PI) - Protection against penetration risks: 1.3 Coating (C), ZA.1d.
- For Principle 2 (MC) - Humidity control: 2.2 Coating (C), ZA.1e.
- For Principle 8 (IR) - Resistance increase through the limitation of the humidity content: 8.2 Coating (C), ZA.1e.

► EN 13813

FONDO SL complies with the principles envisaged in the EN 13813 standard ("Screed material and floor screeds - Screed materials: Properties and requirements") with the following designation:

→ SR-B2.0

- Synthetic resin screed (SR)
- Bond strength: > 2.0 MPa (B2.0)

Colour

FONDO SL is transparent.

Field of application

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- ▶ Consolidating and wetting primer for concrete surfaces and screeds (sand and cement, anhydrite and natural calcium sulphate screeds) before the application of resin coatings.
- ▶ Primer with high filling power for industrial concrete surfaces that have been shot-peened or smoothed with a diamond grinding wheel, and before the application of all types of resin.
- ▶ Primer with high filling power for industrial concrete surfaces after milling, before applying resin coatings of any type.
- ▶ A consolidating agent with high penetration power to increase the compressive strength and tensile strength of poorly cohesive concrete, sand and cement, asphalt, wood and natural stone surfaces.
- ▶ Creation of castable mortars for filling.
- ▶ Creation of open-pore spreadable mortars with “damp ground” consistency.
- ▶ Creation on-site of soft and viscous fillers for filling small irregular patches or superficial pores.

Advantages

- A single product for all surface preparation needs before the application of various types of resin coatings.
- Solvent-free product.

General preparation of the laying support

- Verify that the surface is free of paints or resin adhesives. If it has, eliminate them.
- The type of treatment to be effected must be chosen in relation to the conditions of the surface: acid wash, sanding, diamond-wheel grinding, milling or shot peening.
- Verify that the level of humidity of the support does not exceed 4% measured according to the carbide method, as per the ASTM D4944 standard.

→ If the support has a humidity above 4%, do not use FONDO SL.

In these cases, adopt alternative solutions.

- ▶ Supports with humidity between 4% and 6%.

Use SW SOLID pure instead of FONDO SL.

- ▶ Supports with humidity above 6%.

Use NORPHEN RICRETE or products of the “Q series” (consult the relative sections of the Catalogue-Price List). As an alternative to FONDO SL.

Specific preparation of the laying support

- ▶ On industrial concrete finished with coloured quartz

Roughen the surface through shot-peening or deep and careful smoothing with a diamond grinding wheel.

- ▶ Reconstruction of the edges of expansion or control joints

- Make two cuts on the side of the joint to be repaired.
- Demolish the deteriorated concrete part down to the necessary depth.
- Apply FONDO SL (A+B) pure as a primer on the part to be reconstructed.
- Fill the extracted part with a mix made up of 1 part by weight of FONDO SL (A+B) + 6 parts by weight of 0.1–1.5 QUARTZ MIX.
- Once it hardens, cut out the joint and seal it with BETONSEAL PU 200.

Preparing the product

In all cases, before adding sands or other special additives to the product, the following preliminary operations are required:

- Shake the container of Component B and pour the latter into the bucket with Component A.
- Mix using a professional mixer until obtaining a homogeneous compound.
- Only at this point, if required, add QUARTZ, SOLVENT or EPOXY SILICA (see following paragraphs), depending on the intended use of FONDO SL.
- After adding sand, solvent or silica, the mix must be thoroughly mixed to make it homogenous.

- ▶ Consolidating and wetting primer for concrete surfaces and screeds before the application of resin coatings.

Use pure for consolidating and wetting concrete surfaces and sand and cement, anhydrite and natural calcium sulphate screeds before the application of resin coatings.

- ▶ Primer with high filling power for industrial concrete surfaces that have been shot-peened or smoothed with a

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diamond grinding wheel, and before the application of all types of resin.

Mix FONDO SL A+B with 0.1–0.3 NATURAL QUARTZ (between 30% and 100% by weight on A+B).

▶ Primer with high filling power for industrial concrete surfaces after milling, before applying resin coatings of any type.

Mix FONDO SL A+B with 0.1–0.3 NATURAL QUARTZ (30% by weight on A+B) and 0.3–0.9 NATURAL QUARTZ (50% by weight on A+B).

▶ A consolidating agent with high penetration power to increase the compressive strength and tensile strength of poorly cohesive concrete, sand and cement, wood and natural stone surfaces.

Dilute FONDO SL A+B with SOLVENT FOR NORPHEN (between 10% and 40% by weight on A+B).

▶ Castable mortar for filling.

Mix 1 part by weight of FONDO SL A+B with 6 parts by weight of 0.2–1.5 QUARTZ MIX.

▶ Spreadable open-pore mortar with “damp ground” consistency.

To modify slopes or to fill irregular patches on the surface before applying resin coatings of any type, add 1 part by weight of FONDO SL A+B and 15 parts by weight of 0.2–1.5 QUARTZ MIX.

▶ Soft or viscous filler made on-site for repairing small irregular zones or superficial pores.

Applied with a trowel with the addition of FONDO SL A+B of EPOXY SILICA (between 2% and 5% by weight on A+B).

Partial use of the package:

- Mix components A and B separately, each in its own container.
- Draw each component by weighing it with a scale and respecting the cross-linking ratio shown on the label of each component.

Application of the product

▶ Consolidating and wetting primer for concrete surfaces and screeds before the application of resin coatings.

• Dip a MEDIUM-BRISTLE ROLLER into the pure A+B container.

• Apply using criss-cross strokes until the surface is completely impregnated.

▶ Primer with high filling power for industrial concrete surfaces that have been shot-peened or smoothed with a diamond grinding wheel, and before the application of all types of resin.

Preparation with 0.1–0.3 NATURAL QUARTZ between 30% and 100% by weight on A+B.

• Pour the product on the surface and spread it using a STEEL TROWEL (model TED 814-02).

▶ Primer with high filling power for industrial concrete surfaces after milling, before applying resin coatings of any type.

Preparation with 0.1–0.3 NATURAL QUARTZ (30% by weight on A+B) and 0.3–0.9 NATURAL QUARTZ (50% by weight on A+B).

• Pour the product on the surface and spread it using a STEEL TROWEL (model TED 814-02).

▶ A consolidating agent with high penetration power to increase the compressive strength and tensile strength of poorly cohesive concrete, sand and cement, wood and natural stone surfaces.

Preparation with the addition of SOLVENT FOR NORPHEN from 10% to 40% by weight.

• Dip a MEDIUM-BRISTLE ROLLER and apply the product with repeated criss-cross strokes to impregnate the surface completely.

▶ Castable mortar for filling.

Preparation with the addition of 6 parts by weight of 0.2–1.5 QUARTZ MIX for each part by weight of FONDO SL (A+B).

• Pour the product on the surface then spread and smooth it using the STEEL TROWEL (model NR 842-203).

▶ Spreadable open-pore mortar with “damp ground” consistency.

Preparation with the addition of 15 parts by weight of 0.2–1.5 QUARTZ MIX for each part by weight of FONDO SL (A+B).

• Pour the product on the surface already treated with one coat of FONDO SL using a roller then level and smooth it using the STEEL TROWEL (model NR 842-203).

▶ Soft or viscous filler made on-site for repairing small irregular zones or superficial pores.

Prepare it with the addition of EPOXY SILICA.

• Pour the product on the surface then spread and smooth it using the STEEL TROWEL (model NR 842-203).

Consumption

▶ Crack repair, cortical and deep consolidation of concrete and screeds:

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type of application	minimum consumption	maximum consumption	UoM	dilution
Consolidating and wetting primer for concrete surfaces and screeds before the application of resin coatings	0,15	0,20	kg/m ²	-
Primer with high filling power for industrial concrete surfaces that have been shot-peened or smoothed with a diamond grinding wheel, before the application of all types of resin	0,45	0,45	kg/m ²	-
Primer with high filling power for industrial concrete surfaces after milling, before applying resin coatings of any type	0,70	0,70	kg/m ²	-
A consolidating agent with high penetration power to increase the compressive strength and tensile strength of poorly cohesive concrete, sand and cement, wood and natural stone surfaces	0,40	0,40	kg/m ²	-
▶ Binder for mortars and grouting				

type of application	minimum consumption	maximum consumption	UoM	dilution
Castable mortar for filling (1 mm thickness)	1,8	1,8	kg/m ²	-
Spreadable open-pore mortar with "damp ground" consistency	2,2	2,2	kg/m ²	-
Soft or viscous filler made on-site for repairing small irregular zones or superficial pores	1,1	1,1	kg/m ²	-

Cleaning of tools

- Wet product: clean with ACETONE or nitro thinner.
- Hardened product: remove mechanically, soak for at least 24 hours in ACETONE or nitro thinner, or use paint strippers (FLUID STRIPPER or GEL STRIPPER).

Useful application tips

- ▶ The choice of the correct version of FONDO SL in relation to the ambient temperature and application surface temperature is made by consulting Table 1:

intervallo di temperatura [°C]	→ versione ottimale
da +0 a +15	FONDO SL INV
oltre +15	FONDO SL EST

Tab. 1: criterion for choosing the WINTER or SUMMER version of FONDO SL.

- ▶ The workability time of the mixture (pot-life) depends on the relevant ambient temperature and on the mixture quantity used. In the hot season it is advisable to prepare smaller mixes.
- ▶ Coating-over time.
To use [xxx] as a primer (without QUARTZ sprinkling), the ideal interval for the subsequent finishing coats is shown in Table 2 below.

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	temperatura [°C]	tempo [ore]
FONDO SL INV	+1	24
FONDO SL INV	+12	5
FONDO SL EST	+20	5

Tab. 2: minimum and maximum covering times of FONDO SL without QUARTZ sprinkling on the basis of the curing temperature.

- If the overcoating is expected to be made after the maximum time, the surface must be sprinkled lightly (roughly 1 kg/m²) with quartz sand on FONDO SL wet.
- Do not apply on rubber surfaces (PVC-P, SBR rubber, nitrile rubber, EPDM etc.)
- When preparing the product, the two components should be mixed with mechanical tools. Do not mix manually.
- Pay special attention to the substrate's humidity content. Humidity levels above 4% can cause the solidified film to bloat.
- In summer, store the product in a cool place to preserve its pot-life.
- In winter store the product in a warm place to preserve good fluidity.
- Mix Components A and B of in the precise RATIO stated on the label.
- If the package is used partially, weigh the single components by reading the exact RATIO by weight on the package.
- Read the Safety Sheet carefully before using the product.

Technical data

► PRODUCT IDENTIFICATION DATA	UoM	value
Density (comp. A) at 23°C, 50% R.H., EN ISO 1675	kg/L	1,10 ± 0,02
Density (comp. B) at 23°C, 50% R.H., EN ISO 1675	kg/L	1,00 ± 0,03
Density (A+B) at 23°C, 50% R.H., EN ISO 1675	kg/L	1,05 ± 0,05
Dry residue, A+B	-	100%
Appearance (Component A)	-	Transparent liquid
Appearance (Component B)	-	Amber liquid
Brookfield apparent dynamic viscosity (A+B, WINTER version, at +12°C / 50% R.H. ASTM#5 spindle, 150 rpm), EN ISO 2555	mPa*s	2000 ± 100
Brookfield apparent dynamic viscosity (A+B, SUMMER version, at +25°C / 50% R.H. ASTM#5 spindle, 150 rpm), EN ISO 2555	mPa*s	650 ± 80

► APPLICATION DATA AND FINAL PERFORMANCES	UoM	Value
Mix ratio by weight (A:B)	-	2 : 1
Pot-life (thermometric), SUMMER version, from +15°C to +40°C, EN ISO 9514	min	15,0 ± 0,2
Pot-life (thermometric), SUMMER version from +23°C to +40°C, EN ISO 9514	min	10,0 ± 0,1
Pot-life (thermometric), WINTER version, from +5°C to +40°C, EN ISO 9514	min	20,0 ± 0,2
Pot-life (thermometric), WINTER version, from +15°C to +40°C, EN ISO 9514	min	5,0 ± 0,1
Application temperature (SUMMER version)	°C	From +15 to +30
Application temperature (WINTER version)	°C	From +5 to +15
Shore D hardness, A+B, curing for 24 hours at +13°C/70% R.H., DIN 53505	-	(46 ± 1)°
Shore D hardness, A+B, curing for 48 hours at +13°C/70% R.H., DIN 53505	-	(62 ± 2)°
Shore D hardness, A+B, curing for 72 hours at +13°C/70% R.H., DIN 53505	-	(70 ± 2)°
Shore D hardness, A+B, curing for 24 hours at +25°C/70% R.H., DIN 53505	-	(60 ± 2)°
Shore D hardness, A+B, curing for 48 hours at +25°C/70% R.H., DIN 53505	-	(66 ± 2)°
Shore D hardness, A+B, curing for 72 hours at +25°C/70% R.H., DIN 53505	-	(75 ± 2)°

► TECHNICAL DATA IN CONFORMITY TO EN 1504-2	UoM	value
Direct tensile adhesion, EN 1542	MPa	> 3.0 (Concrete cohesive fracture)
Permeability to CO ₂ , equivalent air layer thickness SD(CO ₂), EN 1062-6	m	91 ± 1
Permeability to water vapour, equivalent air layer thickness SD, EN ISO 7783	m	1,21 ± 0,26

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► TECHNICAL DATA IN CONFORMITY TO EN 1504-2	UoM	value
Capillary absorption and permeability to water, EN 1062-3	kg/(m ² •√h)	0,005 ± 0,001
Wear resistance – Taber Method, H22 grinding wheel, 1,000 revolutions, 1 kg load, EN ISO 5470-1	mg	100 ± 5
Resistance to thermal shocks, EN 13687-5	MPa	≥ 5
Impact resistance (class), measured on specimens of concrete coated with MC (0.40) as per EN 1766, EN ISO 6272-1	-	Class I

► TECHNICAL DATA IN CONFORMITY TO EN 13813	UoM	value
Bond strength, EN 13892-8	MPa	> 2 (Substrate cohesive fracture)

Storage of the product

- 24 months in the closed original packaging, in a dry and covered place away from direct sunlight, at a temperature between +5°C and +35°C.
- Protect the product against frost.

Packages

VARIANT	PACKAGE	ADR	PACKAGES PER PALLET	COMPONENTS
SUMMER	kit (A+B) da 3 kg	P*	-	A = 2 kg (fustino met.) B = 1 kg (barattolo)
SUMMER	(A+B) da 12 kg	YES	-	A = 8 kg (fustino met.) B = 4 kg (tanica)
WINTER	kit (A+B) da 3 kg	P*	-	A = 2 kg (fustino met.) B = 1 kg (barattolo)
WINTER	(A+B) da 12 kg	YES	-	A = 8 kg (fustino met.) B = 4 kg (tanica)

Legenda ADR:

P* = merce PERICOLOSA imballata in quantità limitata (confezionata come da Cap. 3.4 ADR)

SI' = merce PERICOLOSA

LEGAL NOTES

Advice on how to use our products corresponds to the current state of our knowledge and does not involve the assumption of any guarantee and / or responsibility for the final result of the work. They do not refore exempt the customer from the responsibility of verifying the suitability of the products for the use and the prefixed purposes through preventive tests. The website www.nordresine.com contains the latest revision of this datasheet.

EDITION

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