



## STRATOFLEX

Self-levelling and multi-layer coating  
for industrial floors

CE marking:

• EN 13813 - Designation: SR-  
B2.0-AR0.5-IR4



### TECHNICAL SPECIFICATIONS



### FIELD OF APPLICATION

### APPLICATIONS

### Description

STRATOFLEX is a bi-component epoxy self-levelling product made up of:

- component A: a mixture of liquid epoxy pre-polymers, pigments, additives and special fillers;
- component B: co-polymerisation amine.

Once curing terminates, STRATOFLEX reveals considerable hardness and flexibility properties, withstands mechanical and thermal stress and is specially formulated for coating of floors.

### CE marking

► EN 13813

STRATOFLEX 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-AR1-IR4

- Synthetic resin screed (SR)
- Bond strength: > 2.0 MPa (B2.0)
- BCA wear resistance:
- Impact resistance: 4 Nm (IR4).

### Colour

STRATOFLEX is available in a wide range of colours (see the "Colour catalogue").

Colours on request can also be made. For information, contact the Nord Resine Technical Service at [color@nordresine.com](mailto:color@nordresine.com).

### Field of application

STRATOFLEX is used as:

- self-levelling coating used to create floors with thickness between 1 and 2 mm, on surfaces subject to the transit of forklift trucks (medium load) and frequent washes, that do not require a non-slip coating (food warehouses of all types, light engineering industries, paper mills, typographies, etc.);
- multi-layer coating for creating floors with variable grip (coarseness – depending on the type of quartz sand used) suitable for use in various production sectors, for example kitchens, catering facilities, laboratories for processing meat, cured meats, cheese, fruit, vegetables, bread, pastries, oil, preserves, detergents, breweries, textile laboratories, dyeing plants, etc.

NOTE: to obtain special chemical resistance values, the surface can be finished with NORPHEN 200 HCR (see Technical Sheet) or ESTER VE (see Technical Sheet).

The laying supports on which STRATOFLEX can be applied include:

- new concrete;
- old concrete;

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- sand and cement screeds or ready-mixed and self-levelling cement screeds;
- concrete and screeds on radiant floors;
- wooden panels;
- non-drip aluminium slabs;
- natural stone floors\*;
- tiled floors of all types \*;
- resin coatings\*.

\* provided that the tearing resistance and compressive strength are carefully verified by an expert person on the basis of the final intended use of the floor.

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## Advantages

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### General preparation of the laying support

- The support must be carefully examined to ensure that it is a suitable and structurally sound base.
- The tensile strength must not be below 1.5 MPa.
- The compressive strength must be above 30 MPa.
- 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;
  - shot peening.

In this way, dust, dirt, grease, oil, old adhesives or paints, efflorescence, rust, moulds and other foreign matter will be removed.

- Repair any depressions or loose parts of the floor:
  - up to 2.5 mm: use MALTA RAPIDA 12;
  - beyond 2.5 mm and up to 5 mm: use MALTA RAPIDA 13 sprinkled until saturation with quartz sand.
  - beyond 5 mm: use an epoxy mortar made with 1 part by weight of MALTA BASE and 15 parts by weight of QUARTZ MIX, filling the pores with MALTA BASE supplemented with 0.1–0.3 NATURAL QUARTZ.

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### Specific preparation of the laying support

- Preliminary treatments depending on the substrate's humidity (measured according to the ASTM D4944 or UNI 10329 standard, carbide method):
  - Supports with residual humidity below or equal to 3%: they can be coated without any special precautions.
- If the substrate is not sufficiently cohesive, it can be consolidated with one (or more) coats of FONDO SL diluted with 40% by weight of SOLVENT FOR NORPHEN. Consumption varies between 0.2 and 0.3 kg of FONDO SL (A+B) pure.
- Supports with residual humidity between 3% and 7%: skim coat with W3 IMPERMEABILIZZANTE (refer to the Technical Sheet).
- Supports with residual humidity above 7%: apply Q-PRIMER and Q-RASANTE and sprinkle until saturated (see Technical Sheet).
- Treatment of cracks
  - stabilised cracks with 2 mm maximum width:
    - widen the crack using a diamond grinding wheel to a depth of roughly 1 cm;
    - pour PLAST EPO (see Technical Sheet) into the crack until it is filled completely and adjust it with a trowel;
    - if PLAST EPO runs short, integrate the missing quantity with a second cast;
    - wait 4–6 hours before proceeding with the application of STRATOFLEX.
  - Moving cracks and dividing joints:
    - eliminate joints and cracks via “stitching” with fixed steel bars inserted in the cast (see PLAST EPO Technical Sheet);
    - wait 4–6 hours before proceeding with the application of STRATOFLEX.

- Treatment of the expansion joints

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- The expansion joints present on the bottom of the substrate must be lined up on the surface.
- They can be sealed with medium-modulus bi-component sealants (BETONSEAL PU 200 or 300, see Technical Sheets) or by means of specific profiles.

## Preparing the product

- Criterion for choosing the WINTER or SUMMER version of STRATOFLEX

As for all epoxy-amine products, the reaction speed of STRATOFLEX depends of the temperature of the product and of the environment in which it is applied.

To optimise the ratio between the product's workability during application and the curing speed of the applied product, STRATOFLEX is formulated in two versions:

- SUMMER version: to be used with work temperatures stably between +18°C and +35°C;
- WINTER version: to be used with work temperatures stably between +8°C and +18°C.

- Considerations on the optimal quantity of A+B mixes

In addition to the temperature, the reaction speed between A and B also depends on the mix created.

It is therefore essential, for the successful outcome of the work, to prepare A+B mixes of adequate weight in relation to the application speed, taking into account the temperature.

During the hot months, it is advisable to keep the containers cool to ensure the longest possible pot-life.

The partial use of the package obliges the operator to weigh the ingredients carefully, by always mixing comp. A before drawing the product.

- Creation of the mix

- Pour STRATOFLEX (B) into comp. A and mix thoroughly using a low-speed professional mixer with an impeller.
- The dimensions of the impeller must be suited to the size of the service container (e.g. a 20 kg bucket requires an impeller with roughly 12–15 cm diameter).

## Application of the product

- Creation of a self-levelling floor

- After preparing the A+B mix, without adding any sand, pour the product and adjust its thickness using a notched trowel.
- Favour spreading of the product using a spiked roller.
- If required, after 24 hours apply the top coat with NORPHEN 200 HCR, ESTER VE, NORDPUR ESTERNI (see Technical Sheet).

- Creation of a multi-layer floor

- Prepare the [xxxxx] A+B mix.
- Add 50% by weight (calculated on the total of A+B) of 0.3–0.7 or 0.7–1.2 NATURAL QUARTZ sand, depending on the final thickness of the coating to be obtained.
- Pour the A+B+QUARTZ mix on the surface to be coated and spread it using a steel trowel.
- Favour spreading of the product using a spiked roller (if necessary).
- Sprinkle the surface with NATURAL QUARTZ sand (0.3–0.9 or 0.7–1.2, depending on the desired final grip) until fully saturated.
- The following day, remove the excess sand and recover it, then sand and vacuum the surface.
- At this point, the multi-layer floor can be finished with an additional coat of resin applied with a steel trowel or rubber float, depending on the desired grip.

The product to be used for the top coat must be chosen on the basis of the final chemical resistance of the floor:

- for general-purpose use, apply STRATOFLEX;
- for high general chemical resistance, use NORPHEN 200 HCR;
- for high chemical resistance to concentrated inorganic acids, use ESTER VE.

## Consumption

type of application	minimum consumption	maximum consumption	UoM	dilution
Self-levelling floor (minimum allowed)	2,0	-	kg/m <sup>2</sup>	-

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type of application	minimum consumption	maximum consumption	UoM	dilution
thickness to obtain a smooth surface: 1 mm) *				
Multi-layer floor (with 0.3–0.9 NATURAL QUARTZ mixed with A+B at 50% and used for sprinkling)	1,7	1,8	kg/m <sup>2</sup>	-
Multi-layer floor (with 0.7–1.2 NATURAL QUARTZ mixed with A+B at 50% and used for sprinkling)	2,0	2,1	kg/m <sup>2</sup>	-

\* specific consumption: 2 kg/m<sup>2</sup> per mm of thickness.

## 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

- If the pre-weighed package is used partially, observe the cross-linking ratios by weight indicated on the label. Always weigh the components precisely.
- Do not dilute with alcohol, acetone or other solvents.
- Read the Safety Sheet carefully before using the product.

## Technical data

► PRODUCT IDENTIFICATION DATA	UoM	value
Density at 23°C (Component A), EN ISO 2811-1	kg/L	1,823 ± 0,005
Density at 23°C (Component B), EN ISO 2811-1	kg/L	1,010 ± 0,003
Density at 23°C (A+B mix), EN ISO 2811-1	kg/L	1,721 ± 0,005
Appearance (Component A)	-	Dense and viscous coloured liquid
Appearance (Component B)	-	Fluid straw-yellow liquid
Appearance (A+B mix)	-	Dense and viscous coloured liquid

► APPLICATION DATA AND FINAL PERFORMANCES	UoM	Value
Mix ratio by weight (A:B)	-	7 : 1
Application temperature, SUMMER version	°C	From +8.0 to +18.0
Application temperature, WINTER version	°C	From +18.1 to +35
Pot-life (thermometric), SUMMER version, A+B, from +23°C to +40°C, EN ISO 9514	min	20 ± 3
Pot-life (thermometric), WINTER version, A+B, from +15°C to +40°C, EN ISO 9514	min	45 ± 3
Surface drying time of SUMMER version (+25°C, 70% R.H.), EN ISO 9117-3	hours	6 ± 1
Surface drying time of WINTER version (+15°C, 60% R.H.), EN ISO 9117-3	hours	8 ± 1
Minimum commissioning time (at 23°C, 50% R.H.)	days	7
Flexural strength (7 days at +23°C, 50% R.H.), EN 196-1	MPa	25 ± 1
Compressive strength (7 days at +23°C, 50% R.H.), EN 196-1	MPa	77 ± 2
Adhesion on sandblasted concrete (pull-off test), ASTM D 4541	MPa	> 4,0 Rottura coesiva del calcestruzzo

FINAL PERFORMANCES AS PER EN 13813	UoM	value
Bond strength, UNI EN 13892-8	MPa	3,1 ± 0,3 rottura supporto - classe: B2,0
BCA wear resistance, depth of wear, EN 13892-4	µm	0,00 ± 0,03 classe AR 0,5

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FINAL PERFORMANCES AS PER EN 13813	UoM	value
Impact resistance (class), measured on specimens of concrete coated with MC (0.40) as per EN 1766, EN ISO 6272-1	N•m	4 Classe IR4

## 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 +8°C and +35°C.

## Packages

VARIANT	PACKAGE	ADR	PACKAGES PER PALLET	COMPONENTS
RAL 7040 SUMMER	(A+B) da 8 kg	P*	-	A = 7 kg (fustino met.) B = 1 kg (flacone)
RAL 7040 SUMMER	(A+B) da 20 kg	P*	-	A = 17,5 kg (fustino met.) B = 2,5 kg (tanica)
RAL 7040 WINTER	(A+B) da 8 kg	P*	-	A = 7 kg (fustino met.) B = 1 kg (flacone)
RAL 7040 WINTER	(A+B) da 20 kg	P*	-	A = 17,5 kg (fustino met.) B = 2,5 kg (tanica)
TIER 1 COLOUR (1)	(A+B) da 8 kg	P*	-	A = 7 kg (fustino met.) B = 1 kg (flacone)
TIER 1 COLOUR (1)	(A+B) da 20 kg	P*	-	A = 17,5 kg (fustino met.) B = 2,5 kg (tanica)
TIER 2 COLOUR (1)	(A+B) da 8 kg	P*	-	A = 7 kg (fustino met.) B = 1 kg (flacone)
TIER 2 COLOUR (1)	(A+B) da 20 kg	P*	-	A = 17,5 kg (fustino met.) B = 2,5 kg (tanica)
TIER 3 COLOUR (1)	(A+B) da 8 kg	P*	-	A = 7 kg (fustino met.) B = 1 kg (flacone)
TIER 3 COLOUR (1)	(A+B) da 20 kg	P*	-	A = 17,5 kg (fustino met.) B = 2,5 kg (tanica)
TIER 4 COLOUR (1)	(A+B) da 8 kg	P*	-	A = 7 kg (fustino met.) B = 1 kg (flacone)
TIER 4 COLOUR (1)	(A+B) da 20 kg	P*	-	A = 17,5 kg (fustino met.) B = 2,5 kg (tanica)

Legenda ADR:

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

(1): Price applicable to both the SUMMER and WINTER versions.

## 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](http://www.nordresine.com) contains the latest revision of this datasheet.

## EDITION

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