

# PLANO 120 S/F



Fast setting & drying cement based self levelling compound

- ▷ **Suitable for application thickness of 1 – 7 mm**
- ▷ **Fast drying with high mechanical strength**
- ▷ **Suitable for outdoor and areas with humidity**
- ▷ **Suitable for underfloor heating systems**
- ▷ **Suitable as substrate for wood and resilient floor coverings**
- ▷ **Can be applied in thickness of 20 mm after sand addition**

## Description

PLANO 120 S/F is a one component self levelling compound consisted of cement, fine graded aggregates and special additives. It is suitable for levelling floor irregularities of 1-7 mm in each layer. The fast drying and hardening feature, combined with high compressive and flexural strength, makes PLANO 120 S/F ideal for levelling the substrate prior to the application of coverings in heavy traffic floors in a short time. By adding 25% (in dry weight), of properly graded sand S20 it achieves a thickness of 7-20mm and becomes a wearable surface. PLANO 120 S/F is resistant also to water exposure; therefore, it can be applied also on external floors.

## Certifications

CE Marking with Declaration of Performance (DoP) C00052-CPR-2155022 according EN 13813, category CT-C50-F10-A9-B1,5.

## Uses

Suitable for levelling substrate irregularities of 1 – 7 mm in:

- Internal and external floors with intense traffic like showrooms, shopping malls, hospitals, public buildings, hospitals, offices etc.

For application of resilient and rigid coverings such as:

- Ceramic tiles, PVC, linoleum, carpet, wooden floors etc.
- Decorative coatings like PLANOCOLOR RESIN
- PLANOCOAT EPX epoxy paints and coatings

For application on substrates such as:

- Concrete and cement screeds
- Nonabsorbent substrates by means of appropriate primer

## Technical Data

### Product Identity

Form	Powder
Color	Grey
Chemical substance	Portland cement, aggregates, special additives
Granulometry	D <sub>max</sub> : 0,3 mm
Bulk density	1,5 ± 0,1 kg/L
Storage	12 months on dry area in the original sealed packaging

### Application data (+23°C & 50% R.H.)

Mixing ratio	14,8 – 15,6 %, 3,7 – 3,9L water per 25kg PLANO 120 S/F
With addition of sand S20 25%	12%, 3L water per 25 kg mix PLANO 120 S/F with S20,3:1
Density of the mix	2,2 ± 0,05 kg/L
Dry density	1,9 ± 0,1 kg/L
Application temperature	from +5°C to +35°C
Workability	20 – 30 min
Application thickness	1 – 7 mm
Walkability	2 - 3 hours
Minimum waiting time prior to covering application	6 hours

### Residual humidity after

### Application thickness

	<b>3 mm</b>	<b>6 mm</b>
6 hours	< 3 %	< 5,5 %
8 hours	< 2 %	< 4 %
12 hours	< 1,5 %	< 2,5 %
16 hours	< 1 %	< 2 %
24 hours	< 1 %	< 1,5 %

**Final performance according to EN 13813 with W/C 15%**

Performance		
Flow	150 ± 5 mm	
Compressive strength	> 20 N/mm <sup>2</sup> after 24 hours	≥ 50 N/mm <sup>2</sup> after 28 days
Flexural strength	> 5,0 N/mm <sup>2</sup> after 24 hours	≥ 10 N/mm <sup>2</sup> after 28 days
Abrasion resistance	≤ 9,0 cm <sup>3</sup> /50 cm <sup>2</sup>	
Adhesion	≥ 1,5 N/mm <sup>2</sup> after 28 days	
Reaction to fire	A1	

## Application Procedure

### Substrate Preparation

Cement based substrates have to be compact, level, clean, free of grease, oil, laitance and any substances which may compromise the adhesion of PLANO 120 S/F. The minimum tensile strength shouldn't be less than 1,5 N/mm<sup>2</sup> and the minimum compressive strength at least 25 N/mm<sup>2</sup>. Concrete substrates must be mechanically prepared, for example, by grinding to achieve a uniform surface of open porosity without protruding points. Existing cracks on the substrate should be bonded with the fluid epoxy resin NOVAMIX EPO FLUID. On the still fresh NOVAMIX EPO FLUID surface, scatter NOVAMIX S 500 silica sand or similar in order to create a mineral surface. Existing construction movement joints from the substrate shouldn't be covered from the levelling mortar.

Absorbent substrates should be primed with PLANOPRIMER in order to increase the adhesion and provide a sealed substrate. A substrate of reduced strength should receive consolidation treatment by means of NOVAMIX WATERPRIMER EPX and full coverage with the sand NOVAMIX S 500, by scattering on the still wet primer surface.

Existing floor coverings like in example ceramic tiles, Gres porcelain, marble, terrazzo etc. have to be firmly attached on the substrate. They also must be clean and free of laitance or any substance which will compromise adhesion on them. If required, use for cleaning ALCALINE CLEANER or ACID CLEAN depending on the type of application, and rinse well with water. Prime the clean and dry covering with PLANO CONTACT FAST. For additional information refer to the Technical Data Sheets of the products.

## Preparation of the mix

Mix the content of the 25 kg paper bag PLANO 120 S/F with 3,7 – 3,9 liters of clean and fresh water by means of appropriate electrical stirrer low speed for at least 3 – 5 min or construction mixer, until a viscous uniform mortar free of lumps is obtained. In case of GRANIT S20 sand addition, reduce the quantity of mixing water to 12% of the total mixture.

Do not exceed the maximum recommended quantity of mixing water since this prolongs drying time and reduces the final strength. Let the mixture rest for 1-2 minutes until water bubbles disappear and then apply. The mortar could be used within the next 20min (in a temperature of +20°C). Higher temperatures reduce and lower temperatures increase the working time of the mix.

## Application

PLANO 120 S/F is applied on the desired thickness with a mortar-laying tool, spatula, squeegee or pressure pump. The use of spike roller is not necessary but recommended. Where a second coat is required, this can be applied in about 3 hours in case of light traffic. If the previous coat is completely dry, priming with PLANOPRIMER is required. The waiting time before the covering's application depends on the application thickness, the ambient conditions, and the substrate. The following waiting times refer to laboratory conditions of 23°C and a relative humidity of 50% with a water /powder ratio of 15.5%. In any case, always ensure that residual moisture is lower than that required by the final coating-covering.

## Covering

### Waiting time in hours for application thickness

	3 mm	6 mm
Tiles & natural stones without sensitivity to humidity	6	8
Carpets	6	8
PLANOCOLOR PREMIUM Microcement coatings	6	8
Wooden parquet or wood derivatives	8	16
Natural stones sensitive to humidity	8	16
Coverings such as PVC, Linoleum etc.	8	16
Epoxy self levelling systems such as PLANOCOLOR RESIN	8	16

## Recommendations

PLANO 120 S/F shouldn't be applied:

- In cases where the substrate and ambient temperature is less than +5°C or higher than +35°C
  - Under direct sunlight exposure and/or strong wind
  - On substrates not properly prepared
  - Upon metal, wood or surfaces with polyurethane materials, paints, acrylics, PVC films, asphalts and general materials that in long-term period are polymerized
  - In thick layers. Applies with a maximum of 7 mm per layer or in 8-20mm by adding 25% type S20 quartz sand.
  - Upon loose substrates or substrates not properly cured
  - On nonabsorbent substrates without appropriate primer
- Also note the following
- Do not exceed the recommended quantity of mixing water
  - Protect from rain and frost the first 24 hours
  - Do not add cement, lime, gypsum, other binders or substances which may affect the mortar characteristics
  - The minimum thickness prior to the application of coverings sensitive to humidity like wooden parquet is 3mm.
  - For application thickness of more than 3 mm the PLANO 120 S/F mortar must be isolated from walls and any other vertical element of the structure
  - Application should be performed by professional skilled workers

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## Consumption

The average consumption of PLANO 120 S/F is 1,8 kg/m<sup>2</sup>/mm. This consumption refers to flat floors and doesn't include voids due to inclination or porosity of the substrate.

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## Cleaning

Tools, buckets, tiles etc. can be cleaned with fresh and clean water as long as, PLANO 120 S/F is still fresh. After hardening occurs, cleaning can take place only by mechanical means.

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## Storage

PLANO 120 S/F remains stable for at least 12 months in the original sealed packaging stored in a dry place in temperature between +5°C and +35°C.

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## Packaging

25 kg paper bags

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## Safety instructions

For information and instructions regarding disposal and safe handling, users should refer to the latest Safety Data Sheet of the product containing ecological, toxicological and other safety related data.

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## Legal Notes

The technical data and recommendations contained or listed in this leaflet are the result of laboratory measurements, of our current knowledge and experience. All the above-mentioned information and specifications should in any case be considered as indicative, as they may differ from each other. The Company makes every effort to ensure the accuracy of the information provided herein. Product specifications, prices and availability are subject to change without notice and may differ from those shown.

In practice, variations in materials, substrates and on-site implementation conditions are such that no warranty can be given or implied, as to the merchantability or suitability of the materials for a particular purpose and for the exact conditions of each project. Anyone interested of using the product must be sure beforehand that the product is suitable for the intended use and in any case, the user is solely responsible for any consequences due to the use of the product. Among other things, the Company is not responsible for any normal wear or tear from environmental or other inappropriate conditions. We reserve the right to revise or change the data herein without prior notice.

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For the latest and a valid version of the Technical Data Sheet, the user of the material must refer to our website [www.novamix.gr](http://www.novamix.gr) or directly to the QR Code of the product.



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