



# NOVACOL ULTRA FLEX S2

## Highly deformable tile adhesive

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- ▷ **Very high performance with excellent workability**
  - ▷ **Recommended for large-format surfaces and next-generation tiles**
  - ▷ **Guarantees optimal bonding on all types of substrates**
  - ▷ **Durable under high thermal loads and structural deformations**
  - ▷ **Complete dimensional stability and durability over time**
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### Description

NOVACOL ULTRA FLEX S2 is a one-component cementitious adhesive with very high deformability and excellent workability. Thanks to its exceptional mechanical strength and extended open time, it is the ideal choice for installing all types of tiles — including large-format or low-absorption tiles — in both interior and exterior applications, even under highly demanding conditions.

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### Certifications

CE Marking and Declaration of Performance (DoP) C15032-CPR-2500430 as improved, highly deformable cementitious adhesive for ceramic tiles with extended open time and reduced slip according to EN 12004 Class C2TE S2 Product with very low emissions, VOC emission classification GEV-Emicode EC1<sup>PLUS</sup>, license number 21705/14.02.20. Meets the requirements for LEED v4.1: EQ Credit – Low-Emitting Materials, Adhesives and Sealants.

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### Uses

Suitable for tile installation on:

- Exterior areas, such as terraces, balconies, verandas, swimming pools, etc.
- Interior areas, such as showers, bathrooms, and other humid environments
- All residential and commercial spaces

Suitable for all types of tiles, engineered granite, and natural stone:

- Large-format tiles
- High-traffic areas, such as offices, shopping centers, etc.
- Underfloor heating systems
- Almost all types of substrates, including cement screeds, existing tiles, gypsum boards, cement boards, and stable substrates coated with waterproofing materials

## Technical Data

### Product Identity

Form	Powder
Color	White
Chemical substance	Portland cement, aggregates, special additives
Granulometry	D <sub>max</sub> : 0.6 mm
Bulk density	1.2 ± 0.1 kg/L
Storage	12 months on dry area in the original sealed packaging

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

Mixing ratio	5.6 – 6.0 L of water for 20kg
Density of the mix	1.5 ± 0.05 kg/L
Application temperature	from +5°C up to +35°C
Pot life	≈ 6 hours
Open time	> 30 min
Corrections time	≈ 60 min
Walkability	12 - 24 hours

### Final performance according to EN 12004:2007+A1:2012 (C2TE S2)

	Performance	Requirement
Initial tensile adhesion strength	≥ 3.0 N/mm <sup>2</sup>	≥ 1.0 N/mm <sup>2</sup>
- after water immersion	≥ 1.1 N/mm <sup>2</sup>	≥ 1.0 N/mm <sup>2</sup>
- after heat ageing	≥ 3.4 N/mm <sup>2</sup>	≥ 1.0 N/mm <sup>2</sup>
- after freeze-thaw cycles	≥ 1.3 N/mm <sup>2</sup>	≥ 1.0 N/mm <sup>2</sup>
Extended open time: tensile adhesion strength		
- 30 min	≥ 1.5 N/mm <sup>2</sup>	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm	≤ 0.5 mm
Deformable adhesive: transverse deformation	≥ 5 mm	≥ 5 mm

## Application Procedure

### Substrate Preparation

The substrate has to be compact, clean, free of grease, oil, laitance and any substances which may compromise the adhesion of NOVACOL ULTRA FLEX S2. Concrete substrates should be prepared appropriately mechanically in the example by grinding or sanding to achieve a uniform flat and open porosity surface without protruding points.

Existing ceramic, Gres porcelain tiles, marble and stone coverings on floors and/or walls must be firmly attached to the substrate and free of laitance on their surface which may compromise adhesion. If required clean the coverings with appropriate detergent, depending on the type of dirt, like ALCALINE CLEANER, ACID CLEAN or ACID CLEAN TURBO and rinse with plenty of water.

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### Preparation of the mix

Mix the content of the 20kg paper bag containing NOVACOL ULTRA FLEX S2 (20 kg) with 5.6 – 6.0 L of clean and fresh water by means of appropriate electric stirrer at low speed for at least 3-5 min, until a uniform mortar free of lumps is obtained. During hot periods and in general, it is recommended to avoid direct sunlight exposure of the materials (in powder or liquid form) before use, otherwise the working time is reduced. In any case avoid mixing by hand.

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### Application

NOVACOL ULTRA FLEX S2 is applied using a notched trowel, selecting the appropriate notch size according to the dimensions and type of tile to ensure the recommended adhesive layer thickness and complete coverage of the tile's back. Tiles are placed onto the fresh adhesive, applying even pressure to achieve full contact and adhesion.

For demanding applications — such as exterior areas, tiles larger than 30 cm, large-format tiles over 60 cm, underfloor heating, floors that will be polished or subjected to heavy traffic, as well as tanks or swimming pools — the "back-buttering" technique is recommended. This involves applying adhesive to the back of the tile to ensure complete coverage and resistance to mechanical stresses.

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### Grouting

Grouting can be carried out on walls approximately 6 hours after tile installation, and on floors after 24 hours. For large-format tiles, an extended waiting time may be required before grouting to ensure complete adhesive curing.

For joints up to 10 mm wide, NOVAGROUT PREMIUM is recommended, and for joints up to 5 mm with an especially smooth finish, NOVAGROUT FINE should be used.

For applications in areas requiring high hygiene standards and increased durability, the use of the NOVAGROUT EPOXY grout is recommended.

## Recommendations

Avoid using NOVACOL ULTRA FLEX S2:

- In cases where the substrate and environment temperature is less than +5°C or higher than +35°C
- On PVC, asphalt membranes and in general materials which polymerize in the long run
- On not properly cured substrates
- Over existing expansion joints
- Inside swimming pools without tiles

Also note the following:

- Protect from rain for at least 24 hours and from frost or strong sunlight for approximately 7 days
- On metal or wooden surfaces are suitable for internal use and with a suitable primer
- For tiles of total surface over 900 cm<sup>2</sup> the double-spreading (buttering) technique of adhesive is always recommended
- Swimming pools and tanks may be filled after 21 days from tile installation
- Do not add cement, lime, gypsum or other binders or substances which may affect mortar characteristics
- Application should be performed by professional skilled workers

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## Consumption

Depending on the size of the tiles, the roughness of the substrate as well as the method of bonding. Typical consumption: 2 - 6 kg/m<sup>2</sup>

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## Cleaning

Tools, buckets, tiles etc. can be cleaned with fresh and clean water as long as, NOVACOL ULTRA FLEX S2 is still fresh. After hardening occurs, cleaning can take place by mechanical means.

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## Storage

NOVACOL ULTRA FLEX S2 remains stable for 12 months from production date inside its original sealed packaging, stored in protected dry area in temperature between +5°C and +35°C.

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## Packaging

Multi-layer paper bags of 20 kg.

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## Safety Instructions

For information and instructions regarding storage, disposal, and safe handling, users shall refer to the most recent Safety Data Sheet, which contains ecological, toxicological, and other safety-related data concerning the handling of the product.

Avoid releasing uncured products into the environment and do not discharge it into drains or natural water bodies. Residues, packaging materials, and wash waters shall be collected and disposed of in accordance with applicable national and European legislation.

## 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.

Restrictions and disclaimers apply to the extent permitted by applicable law. The Company has a Technical Support Department, which is the only one responsible for providing technical advice and solutions to deal with problems. Requests to the Technical Support Department are addressed and answered, only in writing.

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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