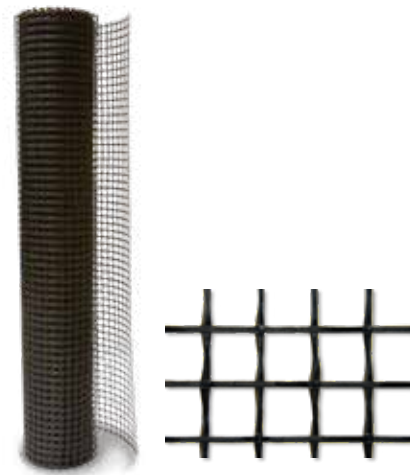


# Geo Grid 120

Balanced, bi-axial, alkali-resistant, basalt fibre mesh specific to repair structural elements or protect non-structural elements at risk of collapse and break-away.

Geo Grid 120 is very easy to handle, easy to work and install. It is possible to use geomortars from the Geocalce range to install the Geo Grid 120 mesh.



1. Excellent durability thanks to the use of high alkali-resistant basalt
2. Quick and easy to install
3. Excellent meshing with matrices from the Geocalce range
4. Ideal for anti-collapse protective systems on stud walls and break-away protective systems on floor slabs

## Areas of application

### → Intended use

- Anti-collapse protective systems for dividing and enclosing walls in reinforced concrete framework or brick buildings
- Protective systems for floor slabs subject to break-away of the bottom layer
- Protective systems for arches, vaults and wattle-type domes

- Suitable when combined with the special single and double thread connectors created using the Geosteel range of sheets and Steel Dryfast helical bars with the special Tassello Steel Dryfast insert.

## Instructions for use

### → Preparation

Geo Grid 120 basalt fibre is ready to use. The mesh can be cut using normal shears. The sheet, even when cut into thin strips, ensures perfect stability without in any way compromising the workability of the sheet and its application, thanks to the particular weave of the mesh.

### → Preparation of substrates

The substrate must be properly prepared and cleaned, always in accordance with the instructions dictated by the construction supervisor

In the case of substrates that are not deteriorated, prepare the surfaces as indicated in the technical data sheet for Geocalce F Antisismico, Geocalce Tenace, Geocalce Multiuso or Geocalce Intonaco.

When the substrate is clearly degraded, uneven, or damaged by significant events, proceed as follows, always in accordance with the construction supervisor:

For brick, tuff and natural stone masonry substrates or wattle-and-daub:

- Completely remove residues from previous processes that could compromise adhesion, and any quantity of inconsistent rendering mortars from the stones;
- Saturation, spray, or brush application, if required, of certified natural stabilizing cortical consolidant with base of pure stabilised potassium silicate in aqueous solution such as Biocalce Silicato Consolidante (do not use this stabilizing agent on gypsum substrate) or alternatively of eco-friendly stabilizing agent, such as Rasobuild Eco Consolidante, dispersed in water, suitable for all substrates;
- Reconstruction, if necessary, of material continuity according to design instructions and the construction supervisor
- Evening out previously consolidated surfaces with structural geo-mortar with a base of pure natural hydraulic lime NHL 3.5 and geo-binder such as Geocalce G Antisismico or Geocalce F Antisismico, depending on the thickness required

- Make sure that the substrate is adequately dampened and with a roughness of at least 5 mm, equal to level 8 of the Test Kit for preparation of reinforced concrete and masonry substrates (follow the instructions on the Geocalce F Antisismico data sheet).

### → Application

Execution of systems to repair structural elements or protect non-structural elements using the basalt fibre Geo Grid 120 mesh and either a Geocalce F Antisismico, Geocalce Tenace, Geocalce Multiuso or Geocalce Intonaco matrix, will be carried out applying a first coat of inorganic matrix, ensuring on the substrate a sufficient quantity of material (average thickness 3-5 mm) to regularize it and to lay and embed the reinforcing mesh. Then apply the Geo Grid 120 basalt-fibre mesh to the still wet matrix. Take care that the mesh is perfectly embedded in the matrix layer, applying firm pressure with a steel spreader or roller. Make sure that the netting protrudes from the mesh, in order to ensure excellent adhesion between the first and second matrix layers and good impregnation of the fibre. Where two meshes are placed side-by-side, and in the case of the longitudinal extension of a strip, overlap two layers of basalt-fibre mesh by at least 30 cm. Finally proceed, wet-on-wet, with the protective final finishing (thickness 2 - 5 mm) in order to totally cover the strengthening grid and seal any possible voids. If there are additional layers after the first, proceed with laying of the second layer of steel fibre over the matrix while it is still wet, repeating the steps described above.

Allow the surfaces to cure for at least 24 hrs. If the protective system is installed in especially aggressive environments, or if further protection is to be provided in addition to that already provided by the matrix, it is recommended to apply Kerakover Silox Pittura on Geocalce F Antisismico, Geocalce Tenace, Geocalce Multiuso or Geocalce Intonaco matrices.

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# Instructions for use

If the works are in permanent or occasional contact with water, the cycles described above must be replaced with a polyurethane epoxy cycle or an osmotic cement depending on the needs of the worksite and the design specifications.

For technical specifications, application, and preparation of the matrix, as well as protective systems adequate for the matrix type, consult the relevant data sheets.

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## Abstract

### *Geocalce Multiuso & Geo Grid 120*

*Execution of anti-collapse protective systems for non-structural elements and for the break-away of floor slabs and false ceilings using an inorganic matrix composite system featuring the balanced basalt-fibre Geo Grid 120 mesh with special alkali-resistant treatment by Kerakoll Spa; net fibre weight of approx. 120 g/m<sup>2</sup>, mesh size 22x22 mm, with the following certified technical characteristics of the mesh: tensile strength, typical value  $\geq 1250$  MPa; elastic modulus  $\geq 56$  GPa; ultimate break warp  $\geq 2.5\%$ ; equivalent thickness of the sheet = 0.023 mm; impregnated with highly breathable and hygroscopic geo-mortar with pure natural hydraulic lime NHL 3.5 and mineral geo-binder Geocalce Multiuso by Kerakoll Spa. To be applied directly to the structure requiring strengthening.*

*The procedure is conducted as follows:*

- 1. Possible restoration of degraded, weakened, non-cohesive, or non-planar surfaces;*
- 2. Preparation of the substrate for application of the first layer of Geocalce Multiuso, the substrate must be adequately roughened by sanding or mechanical scarification, taking care to guarantee a roughness of at least 0.5 mm (equal to level 5 of the Test Kit for preparation of reinforced concrete and masonry substrates), clean and dampened;*
- 3. Lay a first layer, an average of  $\approx 3 - 5$  mm thick of geo-mortar with pure natural NHL 3.5 and geo-binder base, such as Geocalce Multiuso by Kerakoll Spa;*
- 4. While the mortar is still wet, lay the basalt fibre mesh Geo Grid 120 by Kerakoll Spa, and by pressing firmly with a smooth spreader or metal roller, make sure that the sheet is completely impregnated and avoid allowing any gaps or air bubbles to form, because these can compromise the adhesion of the sheet to the matrix or to the substrate;*
- 5. Working fresh on fresh, apply the second layer of geo-mortar, such as Geocalce Multiuso by Kerakoll Spa, until the reinforcing mesh is incorporated and any underlying voids are filled, giving an overall reinforcement thickness of  $\approx 5 - 8$  mm;*
- 6. Repeat steps (4) and (5) if necessary for all subsequent layers called for by the design;*

*Delivery and installation of all the materials described above as well as everything else required to finish the job is included. The following are excluded: removal of any existing plaster/render, restoration of degraded areas and repair of the substrate; connectors, their injection and all the costs and charges required to create them; material acceptance tests; pre- and post-procedure testing, all aids required to perform the work.*

*The price is per unit area of the protection system actually installed, including overlaps.*

### *Geocalce Tenace & Geo Grid 120*

*Execution of anti-collapse protective systems for non-structural elements and for the break-away of floor slabs and false ceilings using an inorganic matrix composite system featuring the balanced basalt-fibre Geo Grid 120 mesh with special alkali-resistant treatment by Kerakoll Spa; net fibre weight of approx. 120 g/m<sup>2</sup>, mesh size 22x22 mm, with the following certified technical characteristics of the mesh: tensile strength, typical value  $\geq 1250$  MPa; elastic modulus  $\geq 56$  GPa; ultimate break warp  $\geq 2.5\%$ ; equivalent thickness of the sheet = 0.023 mm; impregnated with highly breathable and hygroscopic geo-mortar made of pure NHL 3.5 natural hydraulic lime, mineral geo-binder, mineral fibres and inert siliceous sand and Dolomitic limestone materials such as Geocalce Tenace by Kerakoll Spa. To be applied directly to the structure requiring strengthening.*

*The procedure is conducted as follows:*

- 1. Possible restoration of degraded, weakened, non-cohesive, or non-planar surfaces;*
- 2. Preparation of the substrate for application of the first layer of Geocalce Tenace, the substrate must be adequately roughened by sanding or mechanical scarification, taking care to guarantee a roughness of at least 0.5 mm (equal to level 5 of the Test Kit for preparation of reinforced concrete and masonry substrates), clean and dampened;*
- 3. Application of a first layer with an average thickness of approx. 3-5 mm of geo-mortar with pure natural hydraulic lime NHL 3.5, geo-binder, mineral fibres and inert siliceous sand and Dolomitic limestone materials, such as Geocalce Tenace by Kerakoll Spa;*

## Abstract

4. While the mortar is still wet, lay the basalt fibre mesh Geo Grid 120 by Kerakoll Spa, and by pressing firmly with a smooth spreader or metal roller, make sure that the sheet is completely impregnated and avoid allowing any gaps or air bubbles to form, because these can compromise the adhesion of the sheet to the matrix or to the substrate;
5. Working fresh on fresh, apply the second layer of geo-mortar, such as Geocalce Tenace by Kerakoll Spa, until the reinforcing mesh is incorporated and any underlying voids are filled, giving an overall reinforcement thickness of  $\approx 5 - 8$  mm;
6. Repeat steps (4) and (5) if necessary for all subsequent layers called for by the design;

Delivery and installation of all the materials described above as well as everything else required to finish the job is included. The following are excluded: removal of any existing plaster/render, restoration of degraded areas and repair of the substrate; connectors, their injection and all the costs and charges required to create them; material acceptance tests; pre- and post-procedure testing, all aids required to perform the work.

The price is per unit area of the protection system actually installed, including overlaps.

### Geocalce F Antisismico & Geo Grid 120

Execution of anti-collapse repair systems of masonry structures, made according to the ReLUIS guidelines, and break-away repair systems of floors and false ceilings, using an inorganic matrix composite system, made with the balanced basalt fibre GeoSteel Grid 120 mesh with a special alkali-resistant treatment by Kerakoll Spa, with net fibre weight of approximately  $120 \text{ g/m}^2$ , mesh size  $22 \times 22$  mm, with the following certified technical characteristics of the mesh: tensile strength, characteristic value  $\geq 1250 \text{ MPa}$ ; elastic modulus  $\geq 56 \text{ GPa}$ ; ultimate break warp  $\geq 2.5\%$ ; equivalent thickness of the sheet =  $0.023 \text{ mm}$ , impregnated with highly breathable and hygroscopic geo-mortar with pure natural hydraulic lime NHL 3.5 and mineral geo-binder Geocalce F Antisismico by Kerakoll Spa, to be applied directly on the structure requiring strengthening.

The procedure is conducted as follows:

1. Any restoration of degraded, weakened, non-cohesive, or non-planar surfaces, using Geocalce G Antisismico or Geocalce F Antisismico by Kerakoll Spa and in any case as prescribed and approved by the construction supervisor;
2. Preparation of the substrate for application of the first layer of Geocalce F Antisismico, the substrate must be adequately roughened by sanding or mechanical scarification, taking care to guarantee a roughness of at least  $5 \text{ mm}$  (equal to level 8 of the Test Kit for preparation of reinforced concrete and masonry), clean and dampened;
3. Lay a first layer, an average of  $\approx 3-5 \text{ mm}$  thick of fine-grain, structural, geo-mortar with pure natural hydraulic lime NHL 3.5 and geo-binder base, such as Geocalce F Antisismico by Kerakoll Spa;
4. While the mortar is still wet, lay the basalt fibre mesh Geo Grid 120 by Kerakoll Spa, and by pressing firmly with a smooth spreader or metal roller, make sure that the sheet is completely impregnated and avoid allowing any gaps or air bubbles to form, because these can compromise the adhesion of the sheet to the matrix or to the substrate;
5. Working fresh on fresh, apply the second layer of structural geo-mortar, such as Geocalce F Antisismico by Kerakoll Spa, until the reinforcing mesh is incorporated and any underlying voids are filled, giving an overall reinforcement thickness of  $\approx 5 - 8 \text{ mm}$ ;
6. Repeat steps (4) and (5) if necessary for all subsequent layers called for by the design;

Delivery and installation of all the materials described above as well as everything else required to finish the job is included. The following are excluded: removal of any existing plaster/render, restoration of degraded areas and repair of the substrate; connectors, their injection and all the costs and charges required to create them; material acceptance tests; pre- and post-procedure testing, all aids required to perform the work.

The price is per unit area of the protection system actually installed, including overlaps.

**Dry fabric technical information**

Appearance	mesh impregnated with protective alkali-resistant treatment
Nature of material	basalt
Total mass	≈ 130 g/m <sup>2</sup>
Roll width	≈ 1 m
Roll length	≈ 25 m
Mesh width	≈ 22x22 mm
Shelf life	unlimited
Pack	25 m rolls
Weight of roll	≈ 3.5 kg (1 roll)

**Dry fabric technical properties**

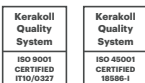
Medium tensile stress	$\sigma_{\text{wire}}$	≥ 1250 MPa
Medium elastic modulus	$E_{\text{wire}}$	≥ 56 GPa

**Mesh technical characteristics (0° - 90°)**

Equivalent thickness of mesh	$t_f$	0,023 mm
Tensile load by unit of width	$F_f$	≥ 30 kN/m
Break warp	$\epsilon_f$	≥ 2.5%
Tensile strength	$\sigma_f$	≥ 1600 MPa

## Warning

- Abide by any standards and national regulations
- when handling the mesh, wear protective clothing and goggles, and follow the instructions on how to apply the material
- store in a dry place and away from substances that may compromise the integrity and adhesion with the chosen matrix
- the product is an item according to the definitions of the EC Regulation No. 1907/2006 and therefore does not require a Safety Data Sheet
- for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516



The Rating classifications refer to the GreenBuilding Rating Manual 2012. This information was last updated in January 2025; please note that additions and/or amendments may be made over time by KERAKOLL SpA; for the latest version, see [www.kerakoll.com](http://www.kerakoll.com). KERAKOLL SpA shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions of your building site and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.