

# TNF VarioRapid

## TNF VarioRapid Trass grout mortar for natural stone



### Highly deformable flexible grout with effective crystalline water retention

CG 2 FWA acc. EN 13888

- recipe with original tubag trass
- Fast-setting grout for grouting marble and natural stone slabs
- Increased protection against efflorescence and edge discoloration
- Can be walked on and loaded quickly
- Portland cement free
- for layer thickness of 2 – 12 mm



### APPLICATIONS

- for grouting polished or ground natural stone slabs
- For grouting natural stone slabs and ceramic coverings that are sensitive to discoloration in accordance with the requirements of DIN 18332 and DIN 18352
- suitable for usage categories N1 and N2 in accordance with ZTV Wegebau (Additional Technical Terms of Contract for Road Construction)
- for traffic surfaces subject to light vehicles up to 3.5 t
- for floor coverings on terraces, balconies, staircases, stair landings, window sills, underfloor heating systems (heated screeds)
- for Limestone slabs (Solnhofen, Jura marble, travertine), crystalline marble (Carrara, Sabiato, Thassos), Granite, Basalt, Stoneware, Earthenware, Fine stoneware, Cotto, Glass and sinter glass mosaics
- In wall and floor areas
- for interior and external use

### PROPERTIES

- Fulfills the requirements CG 2 FWA according to DIN EN 13888 for fast-setting cementitious grouts with particularly high abrasion resistance and reduced water absorption
- very low emissions EC 1<sup>PLUS</sup> according to GEV-EMICODE
- mineral
- Hydraulically fast hardening (F)
- Reduced water absorption (W)
- highly flexible
- Increased abrasion resistance (A)
- Increased resistance to acids with a pH value  $\geq 3$
- smooth and easy to process
- can be spread as slurry grout
- weather and frost resistant after hardening
- water retention capacity, stiffening and washing off behaviour specially designed for low-absorbent coverings

### COMPOSITION

- Special cements
- trass in accordance with DIN 51043
- graded silica sand according to DIN EN 13139
- additives for regulating and improving workability and product properties
- inorganic, alkali-resistant colour pigments

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SUBSTRATE	
<b>Properties/tests</b>	<ul style="list-style-type: none"><li>■ Laid coverings may only be grouted once the mortar bed has completely hardened.</li><li>■ For large format tiles we recommend at least 5 mm or 1 % of the longest tile side as the joint width.</li></ul>
<b>Pretreatment</b>	<ul style="list-style-type: none"><li>■ Scratch the joints out evenly deep before the bedding mortar hardens and clean them.</li><li>■ In case of absorbent coverings, pre-wet the joint immediately before grouting.</li><li>■ If necessary, apply tubag FHI over the entire surface of the pavement 24 hours before the jointing work to minimise binder residues (for application see TM tubag FHI).</li></ul>
PROCESSING	
<b>Temperature</b>	<ul style="list-style-type: none"><li>■ Do not process or allow to dry out at air, material or substrate temperatures below +5°C, or if there is a risk of exposure to night frost, or at temperatures above +30°C, or in direct sunlight, or on heated up surfaces, and/or in windy conditions.</li></ul>
<b>Mixing / Preparation / Processing</b>	<ul style="list-style-type: none"><li>■ When mixing manually, first place the quantity of water specified in the technical data in a clean container and then sprinkle in dry mortar. Use clean tap water.</li><li>■ Mix the material homogeneously and lump-free using a suitable agitator, leave to mature for 3 minutes and then stir again, adding more water if necessary, and adjust the consistency to suit the application.</li><li>■ Do not mix with other products and/or other substances.</li></ul>
<b>Processing</b>	<ul style="list-style-type: none"><li>■ Slurry the grout diagonally to the course of the joint with a suitable hard rubber board or foam rubber grout board flush with the surface.</li><li>■ Grout again wet-in-wet if necessary.</li><li>■ After sufficient tightening of the mortar (finger test), wash off excess material with a firm and slightly damp sponge or sponge board diagonally to the joint line without washing out the joint surface.</li><li>■ If the paving units have bevelled edges, the level of the grout after cleaning must be no higher than the bottom edge of the bevel.</li></ul>
<b>Processing / Working time</b>	<ul style="list-style-type: none"><li>■ Approx. 30 minutes at +20 °C and 65 % relative humidity.</li><li>■ Mortar that has already started to harden must never be thinned down with additional water, remixed or applied.</li></ul>
<b>Drying / Hardening</b>	<ul style="list-style-type: none"><li>■ Protect the fresh mortar from drying out too quickly and from unfavourable weather conditions such as frost, draughts, direct sunlight and direct exposure to driving rain if necessary by hanging with foil.</li><li>■ The grouted surface can be walked on after approx. 2 – 3 hours and can be loaded after approx. 6 hours (at +20 °C).</li></ul>
<b>Cleaning the tools</b>	<ul style="list-style-type: none"><li>■ Clean all tools and equipment with water immediately after use.</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>■ Unevenly mixed material, residual moisture in the substrate or unevenly absorbent substrates and coverings as well as unevenly deep joints can lead to uneven, patchy drying of the grout.</li><li>■ With polished, open-pored, ground, profiled and unglazed surfaces, colour pigments can settle in the micropores in the surface. A strong colour contrast between tile and grout is therefore not advisable. In case of doubt, carry out a trial grouting.</li><li>■ We recommend performing a grouting test before carrying out the work.</li><li>■ Optically related areas must be prepared with material from the same production batch to prevent colour differences.</li><li>■ In case of unfavourable hardening conditions, the quality and aesthetics of the joint can be improved by treating it afterwards with clean tap water.</li><li>■ <b>Cleaning instructions:</b> Acid media may attach cement-based grout mortars depending on their concentration. When using acid cleaning agents, comply strictly with the manufacturer's application specifications. Before use, the area being cleaned is to be pre-wet with water and rinsed off with sufficient water immediately after cleaning.</li><li>■ After completion of the installation work, a final cleaning of the construction site is recommended.</li></ul>

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### PACKAGING

- 5 kg/PCR bucket

### STORAGE

- Store dry and as per instructions.

### QUANTITY REQUIRED / YIELD

- consumption: depending on slab dimensions and joint width

### TECHNICAL DATA

Shade/color tones	grey, sand grey, beige, anthracite
Grain	0 – 0,3 mm
Joint width	2 – 12 mm
Joint depth	depending on the application
Early compressive strength	≥ 7.5 N/mm <sup>2</sup> nach nicht mehr als 6 Stunden
Compressive strength after 28 days	≥ 20 N/mm <sup>2</sup>
Flexural strength (after 28 days)	≥ 2,5 N/mm <sup>2</sup>
shrinkage	≤ 3 mm/m
Processing temperature	+5°C to +30°C
Water requirement	approx. 1.5 l per 5 kg/PCR bucket
Fresh raw density	approx. 1.6 kg/dm <sup>3</sup>
Processing time	approx. 30 minutes
Walkability	after approx. 3 hours
Resilience	after approx. 6 hours

All data are average values that were determined under laboratory conditions according to relevant test standards and application tests. Deviations are possible under practical conditions.

### SAFETY AND DISPOSAL INSTRUCTIONS

<b>Safety</b>	<ul style="list-style-type: none"><li>■ This product produces an alkaline reaction when it comes into contact with moisture/water. Therefore ensure that skin and eyes are protected. If it should come into contact with the skin or eyes, rinse them thoroughly with water. See a doctor immediately if it comes into contact with the eyes.</li><li>■ Follow further instructions in the safety data sheet.</li></ul>
<b>GISCODE</b>	<ul style="list-style-type: none"><li>■ ZP1 (products containing cement, low-chromate)</li></ul>
<b>Disposal</b>	<ul style="list-style-type: none"><li>■ Completely empty and recycle the packaging.</li><li>■ Dispose of the material in accordance with the official regulations.</li><li>■ Dispose of hardened product in accordance with the local regulations. Do not allow to enter the sewer system. Dispose of the hardened product in the same way as concrete waste and slurries. Waste code according to the Ordinance on the European Waste Catalogue depending on the origin: 17 01 01 (concrete) or 10 13 14 (concretewaste and concrete slurries).</li></ul>

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### GENERAL INFORMATION

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This information sheet provides only general recommendations. Should you have any queries relating to a specific application, please contact our technical sales advisor or call our hotline: +49 541 601-601. All of the details given are based on our current knowledge and experience and on the assumption that the materials are professionally applied and used for their normal purpose. All of the details are non-binding and do not release users from their duty to undertake their own tests to ensure suitability for the intended application. Due to the effects of different weather, processing and construction site conditions, no guarantee can be given for the general validity of all details. We reserve the right to make changes as a result of further development of the product and applications engineering. The general rules for construction engineering, the valid standards and guidelines, and the technical working guidelines must be observed. The publication of this technical data sheet renders all previous editions of this data sheet void. Please obtain the latest information from our website.