

# TN-s

## Special thick-bed trass mortar for natural stone



Bedding mortar for highly colour-sensitive natural stone pavements e.g. Jurassic marble, Carrara etc.

Standard masonry mortar M10 acc. EN 998-2  
NM III according to DIN 20000-412



### APPLICATIONS

- add Flexo trass emulsion for heavy duty
- for indoor and outdoor applications
- for floor coverings, terraces, staircases, stair landings, window sills
- due to the binding agent combination as well as selected admixtures, particularly suitable for laying natural stones that are highly susceptible to discolouration
- for minimum mortar bed thicknesses of approx. 2 cm with plastic consistency

### PROPERTIES

- meets the requirements of DIN 18352 and DIN 18332
- mineral
- high stability
- high bonding strength
- with high trass content
- with trass to reduce the risk of lime efflorescence and discolouration on natural stones as well as for an optimised hardening process
- easy to process
- frost-resistant and water-resistant after hardening

### COMPOSITION

- cement in accordance with DIN EN 197-1
- trass in accordance with DIN 51043
- graded stone aggregates in accordance with DIN 13139
- additives for regulating and improving workability and product properties

### SUBSTRATE

- |                         |   |
|-------------------------|---|
| <b>Properties/tests</b> | ■ The substrate must be dry, load bearing, frost-free and hardened. |
| <b>Pretreatment</b>     | ■ Absorbent substrates must be pre-treated.                         |

### PROCESSING

<b>Temperature</b>	<ul style="list-style-type: none"> <li>Do not process, allow to cure or harden in air, material or substrate temperatures of less than +5°C and over +30°C, in direct sunlight, and/or in strong wind.</li> </ul>
<b>Mixing / Preparation / Processing</b>	<ul style="list-style-type: none"> <li>Using a flow mixer, gravity mixer or compulsory mixer, mix the dry mortar with clean water for no longer than 2 to 3 minutes to achieve the correct consistency.</li> <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>use a suitable agitator to mix the material until smooth and free of lumps. Leave to rest for a moment and then mix again, adding more water, if required, to achieve the right consistency for applying.</li> <li>Some of the mixing water can be replaced with tubag Flexo trass emulsion to further enhance the product.</li> <li>Consistency earth-moist: approx. 4.25 - 4.5 l of water to 40 kg</li> <li>Consistency earth-moist enhanced: approx. 3.5 l of water + 0.7 l of Flexo trass emulsion to 40 kg</li> <li>Consistency stiff plastic: approx. 5 - 5.5 l of water to 40 kg</li> <li>Consistency stiff plastic enhanced: approx. 5 l of water + 1 l of Flexo trass emulsion to 40 kg</li> <li>Do not mix with other products and/or other substances.</li> </ul>
<b>Processing</b>	<ul style="list-style-type: none"> <li>Depending on the installation type and condition of the natural stone, natural stones and ceramic tiles are to be laid over the whole area in the slightly plastic bedding mortar without cavities.</li> <li>In case of earth-moist installation, a bonding slurry, e.g. tubag TNH-flex trass bonding slurry for natural stone is to be used.</li> <li>The minimum layer thicknesses is approx. 2 cm with plastic consistency.</li> </ul>
<b>Processing / Working time</b>	<ul style="list-style-type: none"> <li>approx. 1 hour in case of earth-moist consistency</li> <li>approx. 2 hours in case of stiff, plastic consistency</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> </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>In case of special demands, e.g. underfloor heating or thermal stress outdoors, the mortar is to be enhanced with Flexo trass emulsion.</li> <li>Only close the joints once the bedding mortar has dried out.</li> </ul>

### PACKAGING

- 40 kg/bag
- loose in silo

### STORAGE

- Store sacks appropriately and in dry conditions on pallets.

### QUANTITY REQUIRED / YIELD

- consumption: approx. 15 kg/m<sup>2</sup> per 1 cm layer thickness
- yield: app. 26 l fresh mortar per 40 kg/bag
- yield: app. 650 l fresh mortar per t

### TECHNICAL DATA

<b>Binder base</b>	Trass cement
<b>Product type</b>	Normal masonry mortar (G) according to EN 998-2
<b>Mortar group</b>	NM III according to DIN 20000-412
<b>Water requirement</b>	(depending on application consistency) approx. 4.25 – 5.5 l per 40 kg/bag
<b>Grain</b>	0 – 4 mm
<b>Compressive strength</b>	≥ 10 N/mm <sup>2</sup>

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>■ Further information can be found in the safety data sheet at <a href="http://www.tubag.de">www.tubag.de</a>.</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>■ Dispose of the material in accordance with the official regulations.</li> <li>■ Completely empty and recycle the packaging.</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 (concreteste and concrete slurries).</li> </ul>

### GENERAL INFORMATION

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. Since natural raw materials are used, the values and properties described may vary somewhat. 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.