

# TPM-D 4 mm rapid

## Trass paving drainage mortar



### Free-draining bedding mortar

- specially developed for road construction
- rapid version: accelerated setting for early traffic release
- with anti-capillary effect to stop rising moisture
- compressive strength:
  - 1d  $\geq 20$  N/mm<sup>2</sup>
  - 7d  $\geq 35$  N/mm<sup>2</sup>
  - 28d  $\geq 40$  N/mm<sup>2</sup>



## APPLICATIONS

- for laying paving slab surfaces
- for surfaces with heavy traffic loads
- for producing drainage gutters

## PROPERTIES

- high early strength development
- with trass to reduce the risk of lime efflorescence and discolouration on natural stones as well as for an optimised hardening process
- good workability
- single-component
- high compressive strength
- high adhesive tensile strength
- high frost resistance

## COMPOSITION

- cement in accordance with DIN EN 197-1
- trass in accordance with DIN 51043
- graded stone aggregates in accordance with DIN 13139
- Admixture with general building authority approval for improving the processing properties

## SUBSTRATE

- Suitable substrates
  - water-permeable base courses

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### 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>■ Mix mortar homogeneously and without lumps using suitable machine technology, e.g. compulsory or continuous mixer.</li><li>■ The right consistency is reached when a ball formed from the bedding mortar does not crumble and a slight sheen appears on the surface.</li></ul>
<b>Processing</b>	<ul style="list-style-type: none"><li>■ The bedding mortar must be compacted by approx. 25 % by knocking in the stones or tiles.</li><li>■ With large formats, it may be necessary to pre-compact the mortar, e.g. by pressing on it.</li></ul>
<b>Processing / Working time</b>	<ul style="list-style-type: none"><li>■ approx. 2 hours</li><li>■ The stated times apply for a temperature of +20°C and relative humidity of 65%.</li><li>■ Dried out mortar is identified from the fact that the surface turns whitish. In this state the mortar must no longer be processed.</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 paving area can be walked on by pedestrians after approx. 12 hours in dry weather and can withstand vehicle loads (cars) to a limited extent at the earliest after 1 day.</li><li>■ A complete approval for traffic with high traffic loads can be given after 7 days.</li><li>■ The time from which a paving stone or tile covering can be approved for the usage is essentially based on the installation and hydration temperature of the paving stone grout and bedding mortar. The specified periods and times only apply as long as the traffic area has been grouted with tubag PFH paving stone grout mortar.</li><li>■ Timings relate to +20°C and 65% relative humidity.</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>

### PACKAGING

- 40 kg/bag
- loose in silo

### STORAGE

- Store sacks appropriately and in dry conditions on pallets.

### QUANTITY REQUIRED / YIELD

- yield: app. 20-26 l fresh mortar per 40 kg/bag
- yield: app. 500-650 l fresh mortar per t

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### TECHNICAL DATA

<b>Grain</b>	0 – 4 mm
<b>Water requirement</b>	approx. 3.5 l per 40 kg/bag
<b>Processing consistency</b>	earth-moist
<b>Processing temperature</b>	+5°C to +30°C
<b>Processing time</b>	approx. 2 hours
<b>Intake strength</b>	3 - 6 cm
<b>Compressive strength</b>	after 1 day $\geq 20$ N/mm <sup>2</sup> after 7 days $\geq 35$ N/mm <sup>2</sup> after 28 days $\geq 40$ N/mm <sup>2</sup>
<b>water permeability coefficient</b>	$> 5,4 \times 10^{-4}$ m/s
<b>Drainable rainfall</b>	$> 270$ l/(s*ha)

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 (concretewaste 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. 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.