PERMEABLE HARDSCAPE
North America

SHS Distributors
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Xtreme Trass

VDW 480 Frost Resistant Drainage Mortar

The PHNA Xtreme Trass bedding compound is a high strength, highly-plastic modified, frost-resistant drainage mortar for the laying of natural stone, slabs, tile, and concrete pavers.

- Highly drainable
- Frost and de-icing salt resistant
- No efflorescence despite rapid hardening
- High-quality plastic coating resists capillary effect
- For light to heavy traffic loads
- Compressive strength up to 5500 psi
- Eliminate the need for a concrete sub-slab
- Can be grouted 24 hours after installation
- Compatible with radiant heating / snowmelt systems

10 YEAR WARRANTY

Component #1 of our 3-part PHNA Full Paving System

1.**Xtreme Trass bedding compound (Trass Bedding)**
2.Xtreme Adhesion Elutriant
3.PHNA 2-component Epoxy Jointing Compound

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Technical Data

Application Time
Approx. 1 hour at 20°C | 68°F* application temp.
*Quick hardening at higher temperatures, and slow hardening at lower temperatures.

Temperature
5-25°C | 41-77°F *(Do not lay onto frozen ground.)*

Material Requirement
Clean 1/8" - 3/8" crushed aggregate mixed at 1:4 ratio

1 part Xtreme Trass to 4 parts aggregate
(approx. 220 lbs. aggregate per each 55 lb. bag of bedding compound)
*Mixing ratio of 1:6 is possible and suitable for light pedestrian loads

Water Addition
Approx. 11 liters | 2.9 gal. of cool, clean water per 25 kg | 55 lb. bag of mortar mixture

Compressive Strength
2900 - 5500 psi at 3 and 28 days (dependent on filler material and mixing ratio)

Flexural Strength
Approx. 1015 psi

Ingredients
Cement according to EN 197, Trass according to DIN 51043, and special additives

Storage Life
1 year if stored unopened in sealed and undamaged packaging. Must also be kept dry and frost-free.

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Mixing & Installation Instructions

for PHNA Xtreme Trass / VDW 480 Frost Resistant Drainage Mortar

1.Construction Site Requirements

The subsurface must be made load bearing, firm and water permeable. Ensure drainage through permeable subsoil or a sufficient drainage gradient. Water impermeable load distribution layers, such as areas with house utility connections or any slab coverings that are laid, need to have a slope of at least 1.5–3.0%. In case of any watertight outdoor areas and levels where water flows or partial puddles form, it is recommended to install a suitable capillary-breaking drainage mat. Ambient and substrate temperature should be 41-77°F, and the process should be carried out in dry weather.

2. Mixing

RECOMMENDED MIXING RATIO

1 volume part Xtreme Trass
4 volume parts suitable aggregate (i.e. 1/8" - 3/8" clean crushed or rolled grit/gravel)

11 liters | 2.9 gal cool, clean water per 25 kg | 55 lb. bedding compound - make note of wet/damp aggregate and reduce water consumption accordingly

Using a compulsory mixer or gravity mixer, mix the Xtreme Trass in a ratio of 1:4 with suitable aggregate and water, and mix so that it becomes earth-moist; total mixing time 4–5 minutes. First add the aggregate and approx. 75% of the water to the mixer, followed by the Xtreme Trass. Little-by-little, continue to add the remaining water to the mixture until the mortar is slightly shiny and can be formed into a loose ball. For smaller batches, mixing can be completed in a wheelbarrow or mortar tub -these methods may require a longer mixing time to achieve a homogeneous mortar. After mixing, the mortar is ready for immediate use. It is recommended to use the entire bag of bedding compound when possible, but for smaller batches precise quantities should be weighed out. Expect approx. 2.5 - 2.7 ft^3 of coverage per unit mixed at a 1:4 ratio.

3. Application

Apply the mixed bedding mortar manually in layers of minimum 1.5" and maximum 4" thickness. In the case of pavers or stones that are uniform in thickness, the bedding mortar can be leveled to the required layer thickness using screed bars. The underside of paving units need to be pre-treated with our Xtreme Adhesion Elutriant (vdw 495) and set at the correct height before hammering into place with a rubber mallet or dead-blow hammer. The joint area must be water-permeable and therefore also free of Xtreme Adhesion Elutriant universal bonding bridge.

Post-treatment: The bedding mortar must be protected from drying out too quickly, and therefore avoiding excessive heat. After installation, the bedding mortar must be protected against drying out for a sufficiently long period, but at least 24 hours. Covering with a tarp may be necessary for this time. The surface should also be covered in the event of adverse weather, such as sustained rainfall.

4.Important Information

The surface can be walked on after 24 hours, or after the mortar has hardened. Grouting can also be carried out at this time. Full resilience will be reached after 7 days, but vehicular areas should not be opened to traffic until the grout has also sufficiently cured. Please refer to the data sheet of the grout used for this information

How To Guide