Range of use

- For use indoors and outdoors
- Permanent connection of massy construction elements that are exposed to high dynamic loads, on and offshore (e.g., grout connections on wind power plants)
- ICE railway sleepers
- Surfaces and moulded components that are exposed to high attrition

Property profile

Remmers Grout HQ3 Plus is a cement bound, chloride and shrinkage-free, factory-mixed, dry mortar with high sulphate resistance and low effective alkali content that is ready to use after mixing with water. It can be produced with all conventional positive mixers.

The material achieves very high early and ultimate strength in connection with very good flow and pumping properties. The DNV-GL-certified special mortar adheres well, is water impermeable, vapour diffusion open and resistant to frost and de-icing salt.

Characteristic data of the product

Largest grain: 3 mm
Water requirements: 7,5-8,0 %
Slump after 8 min.: ≥ 700 mm
   after 60 min.: ≥ 650 mm
   after 120 min.: ≥ 600 mm
   after 180 min.: ≥ 550 mm
   after 240 min.: ≥ 500 mm
Working time at 20 °C: approx. 240min.
Degree of swelling after 24 h: + 0.5 % by volume
Fresh mortar density: approx. 2.45 kg/dm³
Compressive strength on prisms
   After 24 h: ≥ 65 N/mm²
   After 7 days: ≥ 120 N/mm²
   After 28 days: ≥ 140 N/mm²
   After 90 days: > 150 N/mm²
Exposure class assignment in accordance with EN 206-1/DIN 1045-2:
   XC1 – XC4; XD1 – XD3, XO
   XS1 – XS3; XF1 – XF4*
  XA1 – XA3; XM1* – XM3
Moisture class assignment: WO, WF, WA, WS
Fire class (EN 13501): A1
Classification according to DAFStb Rili - VeBMR:
   Consistency class: f₂
   Shrinkage class: SKVM I
   Early strength class: A
   Compressive strength class: C 100/115

*Exposure classes XM1 – XM3 and XF4 are excluded from Rili - VeBMR.
Substrate
The substrate must be clean, sound and pre-wet to saturation. Remove standing water. Remove loose material and other substances that could interfere with adhesion as well as cement grout by sandblasting, scraping or by similar means. The substrate must also be sufficiently rough. The grains close to the surface must be exposed. The pull-off strength of the substrate must be > 1.5 N/mm² on average.

Directions
Pour 1.9 l of water into a clean container (mortar tub), then add 25 kg Grout HQ3 PLUS. Mix thoroughly with a mixer / positive mixer for approx. 8 minutes until a homogeneous, lump-free consistence proper for working has been achieved. If necessary, a small quantity of water up to a max. of 2.0 l in total can be added.

The mortar is normally poured without interruption from just one side or corner; in difficult cases it can also be compacted. The material can be applied in layers from 15 - 300 mm thick.

Notes
Do not use if the temperature of the air, substrate and building material is below +3 °C or above +30 °C. The characteristic data given for the product was determined under laboratory conditions in accordance with DAfStb Rili - VeBMR.

Protect the exposed surfaces of the fresh mortar from extreme weather loads (heat, wind, frost) by covering with plastic sheets or Remmers Concrete Skin art. no. 1230 for at least 3 days.

When cement bound building materials come in contact with non-ferrous metals (e.g. aluminium, zinc, copper), they may have a dissolving effect.

Tools, cleaning
High performance positive mixers with sufficient volume and high mixing power.

Hand mixers are suited only for briefly re-mixing the mortar after process determined pauses. Due to the mixing time, a batch mixer should be used when using a mixing pump.

Clean tools with water while the material is still fresh.

Packaging, application rate, shelf-life
Packaging:
25 kg paper bags, big bags and silo provision on request

Application rate-dry mortar:
Approx. 2.1 kg/l void

Shelf-life:
Approx. 9 months stored dry in closed bags

Safety, ecology, disposal
Further information on safety when transporting, storing and handling as well as disposal and ecology is found in the latest Safety Data Sheet.