BUILDING TRUST

PRODUCT DATA SHEET

PAREX 100 Newton Grout AW GB

Ultra-High Strength Anti-Washout Grout

PRODUCT DESCRIPTION

PAREX 100 Newton Grout AW GB is an ultra-high strength grout specially formulated using a Portland cement powder mix. The mix design consists of a blend of fine and ultra-fine cements, high quality graded sands, and a set of synergistic admixtures. The mix design includes special shrinkage compensating components, which give a non-shrink grout in both the plastic and hardened states. Powerful plasticising agents produce a highly flowing grout at low water content. The product exhibits exceptional anti-washout properties, ideal for underwater applications, and can be installed in single application layer thicknesses up to 350mm.

USES

- Ultra-high strength grout and support systems for:
  - Crane rail tracks.
  - Stanchion bases.
  - Vibrating machinery bed plates.
- Ground anchors.
- Offshore structure repairs.
- Grouting in tidal areas (e.g. piers, jetties, slipways, sea defence walls, etc.).
- Wind turbine bases.
- Underwater grouting projects.

CHARACTERISTICS / ADVANTAGES

- Pre-packaged, only requiring the addition of water.
- Ultra-high strength.
- Provides exceptional structural support and vibration resistance.
- Shrinkage compensated (i.e. 'non-shrink').
- Good strength gain after 24 hours, even at low temperatures.
- Low water content.
- Good freeze-thaw stability.
- Resistant to sea water, petroleum products and mild alkali attack.
- Can be used safely in contact with steel (due to very low chloride content).
- Suitable for pumping applications.
- Anti-washout properties, suitable for underwater applications.
- Application thickness range 10 to 350mm.
- Reaction to fire rating of EuroClass A1.

APPROVALS / STANDARDS

PAREX 100 Newton Grout AW GB has been tested in accordance with the appropriate parts of the following standards:
• EN 12390, EN 196 and EN 1015.
• Corps of Engineers Specification for Non-Shrink Grout CRD C621.

PRODUCT INFORMATION

Chemical Base	Cements, high quality aggregates and synergistic admixtures.
Packaging	25 kg bags and 1000 kg bulk bags.
Shelf Life	6 months from date of manufacture.
Storage Conditions	Store properly in dry conditions in undamaged and unopened original sealed packaging.
Appearance / Colour	Grey powder

Maximum Grain Size	D_{max}: 1.0 mm
Density	~2250kg/m³

TECHNICAL INFORMATION

Compressive Strength (EN 12190)

Duration	Strength (5°C)	Strength (20°C)
24 hours	~20 N/mm²	~40 N/mm²
3 days	~40 N/mm²	~60 N/mm²
7 days	~70 N/mm²	~80 N/mm²
28 days	~90 N/mm²	~100 N/mm²

Modulus of Elasticity in Compression ~32 kN/mm²

Flexural Strength

Duration	Strength (5°C)	Strength (20°C)
24 hours	~4 N/mm²	~6 N/mm²
3 days	~5 N/mm²	~7 N/mm²
7 days	~8 N/mm²	~9 N/mm²
28 days	~10 N/mm²	~10 N/mm²

Tensile Strength

Duration	Strength (5°C)	Strength (20°C)
24 hours	~3 N/mm²	~4 N/mm²
3 days	~4 N/mm²	~6 N/mm²
7 days	~5 N/mm²	~8 N/mm²
28 days	~6 N/mm²	~9 N/mm²

Reaction to Fire EuroClass A1

APPLICATION INFORMATION

Yield	1.0 kg of PAREX 100 Newton Grout AW GB will yield approximately 0.5 litres of mixed grout at the recommended water addition. 1000 kg (1 tonne) of PAREX 100 Newton Grout AW GB will yield approximately 0.52m³ of mixed grout at the recommended water addition. 25kg of PAREX 100 Newton Grout AW GB will yield approximately 12.5 litres of mixed grout at the recommended water addition.
Layer Thickness	10mm minimum / 350mm maximum
Ambient Air Temperature	+5°C minimum / +35°C maximum
Mixing Ratio	Water : mortar powder = 1 : 5.55 parts by weight (4.5 litres of water per 25 kg bag; or 180 litres of water per 1000 kg bag).
Substrate Temperature	+5°C minimum / +35°C maximum
Pot Life	Up to 60 minutes, if kept mobile after mixing.
Initial set time	~220 minutes
Final set time	~300 minutes

VALUE BASE

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

- Do not exceed water addition.
- Not to be used for concrete repair works.
- Do not use vibrating pokers.
- Use only on clean, sound substrate.

- Avoid application in direct sun and / or strong wind.
- Pour or pump from one side only.
- Keep exposed surfaces to a minimum.
- Do not add additional water during the surface finishing as this will cause discoloration and cracking.
- Protect freshly applied material from freezing and frost.
- To avoid cracking in warm temperatures, keep bags cool and use cold water.

SUBSTRATE QUALITY

Concrete surfaces where grout is to be applied should be pre-saturated with clean water. The prepared concrete substrate must be thoroughly saturated with clean water for a recommended 1 hour before application of the grout. The surface must not be allowed to dry within this time. Prior to application of the grout, all water must be removed from within formwork, cavities or pockets and the final surface must achieve a dark matt appearance (i.e. saturated surface dry) without glistening.

SUBSTRATE PREPARATION

Concrete, Mortar, Stone:
Surfaces must be sound, thoroughly clean, free from ice, oils, grease, standing water and any loose or friable particles and any other surface contaminants.
Steel, Iron:
Clean, free from oil or grease, rust and scale, etc.
Shutter / Formwork:
Where formwork is to be used, all formwork should be of adequate strength, treated with release agent and sealed to prevent leakage. Sealing can be achieved by using Sikaflex®-11FC+ sealant beneath or around formwork and between joints. Ensure formwork includes outlets for extraction of the pre-soaking water. A header box / hopper should be constructed on one side of the formwork so that a grout head of 150 to 200mm can be maintained during the grouting operation.

MIXING

Pour the required quantity of clean water (4.5 litres per 25 kg bag or 180 litres per 1000 kg) into the mixing vessel for each complete unit of PAREX 100 Newton Grout AW GB to be used. Slowly add the powder to the water whilst continually mixing. Mechanical mixing should be carried out using either a high torque slow speed drill with a Grout Stirrer or a grout mixer set on slow speed for small mixes; or for larger mixes forced action type mixers (high speed or colloidal mixing may cause thixotropy, leading to loss of flow). **This material is not suitable for mixing by hand.** It is of utmost importance that the product is mixed thoroughly enough that a grout consistency is obtained without the addition of further water.
Fresh grout should be allowed to stand until the air entrapped by mixing has been released.

APPLICATION

Grout should be placed within 10 minutes of mixing or 60 minutes if kept mobile prior to placing. Continuous placing is important, pouring or pumping from one side of the form until the grout appears at the opposite side of the grouting area. Do not disturb once grouting has been completed. PAREX 100 Newton Grout AW GB may be placed at temperatures between 5°C and 35°C.

CURING TREATMENT

After the grout has initially hardened, remove formwork and trim edges while ‘green’.
Protect the fresh material from premature drying using an approved curing method (e.g. curing compound such as Sikafloor® ProSeal, moist geotextile membrane, hessian, polythene sheet, etc.). In cold weather, apply heat blankets to maintain a constant temperature.
Placed grout, which is exposed, should be cured in accordance with good concrete practice.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika’s current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika’s recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product’s suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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