SMARTCARE REPAIR STRUCTURAL GROUT GP

GROUT AND ANCHORING SYSTEM

High strength, non shrink, free flowing precision cementitious grout.

PRODUCT DESCRIPTION

SmartCare Repair Structural Grout GP is a ready-to-use, cementitious, non-shrink precision grout formulated for superior performance. It offers high early and ultimate compressive strength, controlled expansion, and exceptional impermeability to ensure long-lasting durability.

KEY FEATURES

- **Excellent Workability and Mixing:** The product offers easy mixing and excellent workability for placing and finishing even in high temperature.
- **Superior Bonding Capabilities:** It ensures excellent bond strength to steel and concrete, providing a secure structural connection.
- **High Mechanical Strength:** The grout delivers excellent high early and ultimate compressive and flexural strength.
- **Outstanding Adhesion:** It is characterized by excellent adhesion strength to the applied surfaces.
- **Versatile Application Consistency:** The product features adjustable consistency to meet specific project requirements.
- **Shrinkage Compensation:** It compensates shrinkage to ensure a stable and durable fill.
- **Deep Grouting Formulation:** This grout is specially formulated for deep grouting applications.
- **Low Permeability:** The material is designed for low water absorption, enhancing its durability.
- **Rapid Strength Development:** It facilitates rapid strength development for faster structural loading and project progress.

PRODUCT BENEFITS

- High Temperature Performance
- Excellent Bond Strength
- Ultimate Load Bearing
- Moisture Protection

PACKAGING

25kg bag

TECHNICAL PROPERTIES

Properties	Value
Yield	Approx. 13.2 Litres
Setting time (ASTM C 953)	Initial set - 4 hours Final set - 8 hours
Compressive strength (ASTM C 942-81)	14 Days >52 N/mm^2 28 Days >62 N/mm^2
Flexural strength (BS 4551 1980)	>10 N/mm^2 28 Days
Fresh wet density	2230 kg/L
Expansion (ASTM C 827,878)	30 min. up to 0.3%

APPLICATION AREAS

- SmartCare Repair Structural Grout GP is used to eliminate shrinkage when filling the voids under base plates. It can be placed from fluid to damp pack over a temperature range of (5° C to 35° C).

- SmartCare Repair Structural Grout GP can be used for bedding, grouting and precision bearing operations such as Generators, Presses, and Cranes rails, Anchor Bolts, Precast elements, Milling machines, etc.
- SmartCare Repair Structural Grout GP is suitable for use in bridge bearing applications, structural columns grouting, heavy-duty machine bases, post-tensioning cables, Core cut pipe filling, Pile Cap End capsulation, Tile rod filling, etc.
- SmartCare Repair Structural Grout GP by adding clean water produces a flowing non-shrink grout for gap thickness up to 100 mm. The low water
- demand ensures high early strength. The graded filler is designed to assist uniform mixing and produce a consistent grout.

APPLICATION METHOD

1. Preparation:

- Concrete surfaces should be clean, sound, rough and free from oil, grease, cement laitance and all loosely adhering particles.
- Steel and other surfaces must be clean and free of paint, oil and rust. Smooth substrates must be abraded to ensure proper bonding.
- Shim and anchor support elements to prevent movement.
- Saturate the prepared area with potable water for a minimum of 12-24 hours before application.
- Provide grout a tight shutter before pouring/pumping.
- Particular attention should be paid to bolt holes to ensure that these are water-free. Use oil-free compressed air to blow out bolt holes and pockets as necessary.
- Set and align equipment. If shims are to be removed after the grout has set, lightly grease them for easy removal.

2. Mixing:

SmartCare Structural Grout GP should be mixed by mechanical means. Single bags may be mixed using a slow-speed drill or mixing blades. Measure mixing water accurately. Recommended to mix a full bag of 25kg of SmartCare Structural Grout GP approximately with 4 litres of potable water. Adjust the consistency as required. Add the powder to water and mix with a drill until the mortar is smooth and lump-free.

Note: In all cases, the powder must be added to the water.

3. Application:

- Place the SmartCare Structural Grout GP within 5 minutes of mixing to avail the full benefit of the expansion process. Typically, at 25°C ambient temperature, place the mixed grout within 15 minutes. At 35°C ambient temperature, place within 10 minutes of mixing.
- Pour the grout from one side of the opening to avoid air entrapment. It is advisable to pour the grout across the shortest distance of travel. The grout head must always be maintained so that a continuous grout front is achieved. Where large volumes have to be placed, SmartCare Structural Grout GP may be pumped. A heavy-duty diaphragm pump is recommended for this purpose. Screw feed and piston pumps may also be considered.
- Placed grout can be vibrated, if necessary. Do not tamper with the mix by adding water. If the mixed material starts hardening, discard the material and prepare a new set.
- Immediately after SmartCare Structural Grout GP grout is placed, cover all exposed grout with clean, damp hessian, and keep moist until grout is firm enough to accept a curing membrane. Recommended grout placing thickness up to 200 mm.

4. Curing:

Protect against drying winds and direct sunlight. Cover with wet hessian or SmartCare Repair range of curing compounds.

5. Cleaning:

Clean all tools and hands with water before they harden.

PRODUCT LIMITATIONS

- Ensure formwork is secure and watertight to prevent movement and leaking during the placing and curing of the grout. The area should be free of excessive vibration. Shut down adjacent machinery until the grout has hardened.
- In hot weather, base plates and foundations must be shaded from direct sunlight. Bags of grout should be stored in the shade before use.
- In cold weather, the temperature of base plates and foundations should be raised to >10°C.
- At high temperatures, use chilled water for mixing to keep the grout mix temperature below 30 °C. In hot weather, base plates and foundations must be shaded from direct sunlight.
- The mixed materials should be placed within 10 minutes. If any delays happen, discard the batch and mix and use a fresh batch.
- Take additional precautions when conducting the applications during extreme climatic conditions.
- Due to differences in temperature between the grout under the base plate and exposed shoulders that are subject to more rapid temperature changes, de-bonding and/or cracking can occur. Avoid shoulders wherever possible.
- If shoulders are required, they should be firmly anchored with reinforcing to the substrate to prevent de-bonding.

STORAGE CONDITIONS

SmartCare Structural Grout GP must be stored in a dry facility to ensure the material's performance is maintained. It should be kept in its original, unopened bags or packs and stored at a temperature of 25°C.

SHELF LIFE

The product has a shelf life of 12 months, provided it is stored according to the recommended dry conditions and temperature guidelines in its original, unopened packaging.

SAFETY PRECAUTIONS

- Always wear protective gloves, goggles, and clothing during mixing and application to prevent skin or eye irritation.
- Avoid direct contact with skin or eyes; in case of contact, wash the affected area with plenty of clean water.
- If inhaled, move the affected person to fresh air immediately and seek medical advice if discomfort persists.
- Ensure proper ventilation at the site of application to avoid inhalation of fumes.
- Keep away from heat, sparks, and open flames. Do not smoke during handling.

CERTIFICATIONS

SmartCare Repair Structural Grout GP complies with ASTM C 953, ASTM C 1107, ASTM C942-81, BS 4551 1980, ASTM 230, ASTM 878 and ASTM C 827,878.

DISCLAIMER