

PADRAPAT PARS

Products for Grouting



PADRA-Flowcem GCG-235

General purpose cementitious grouting mortar

DESCRIPTION

PADRA-Flowcem GCG-235 is a cementitious, expanding, shrinkage controlled, and construction flowing mortar. PADRA-Flowcem GCG-235 is formulated to expand in two stages to sufficiently counteract the plastic shrinkage normally associated with cement grouts..

WHERE TO USE

PADRA-Flowcem GCG-235 is a general purpose construction cementitious grout which does not shrink while curing and provides sufficient expanding in plastic stage. PADRA-Flowcem GCG-235 can be used for grouting in the following locations:

- Base plates of construction foundations
- Bearing plates in machines and industrial foundations
- Concrete anchors
- Grouting the pre-placed aggregate concrete
- Columns in pre-cast construction
- As a bedding and cavity filling mortar

ADVANTAGES

PADRA-Flowcem GCG-235 offers the following beneficial properties:

- Easy to use (ready for use mortar powder)
- To be mixed with water only
- Very good flow characteristics
- Good mechanical strengths
- Adjustable consistency
- Expands in plastic stage by gas generation to avoid plastic settlement
- Does not shrink while curing, controlled shrinkage in hardening stage
- Can be poured or pumped
- Non-corrosive, non-toxic, non-flammable

TECHNICAL INFORMATION

Colour	Concrete grey (mixed)
Appearance	Powder
Mixing water	3.750 to 4.250 lit. for 25 kg powder
Density	1.750 kg/l (bulk density of powder) 2.320 kg/l (Fresh mortar)
Free expansion	2.0 ~ 4.0 %
Restrained expansion	0.0 ~ 0.4 %
Compressive strength	20 MPa (1 days) 35 MPa (3 days) 45 MPa (28 days)
Flexural strength	> 3 MPa (7 days) > 6 MPa (28 days)
Full cured	After 28 days (at 25 °C)
Working Time / Pot life	30 min. (25 °C)



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HOW TO USE

Surface preparation	<p>Concrete surface should be sound and free of loose particles. Remove dust, laitance, oil, grease, curing compounds, impregnations, waxes, foreign particles, disintegrated materials, and other bond inhibiting materials from the surface. The substrate should be damp but free of standing water. Absorbent surfaces should be saturated thoroughly.</p> <p>Particular attention should be paid to bolt holes to ensure that these are water free. Use oil free compressed air to blow out bolts holes and pockets as necessary. Surface of metals including base plates, bolts, etc. must be clean and free from scale, rust, oil, and grease. Set and align equipment carefully. If shims are to be removed after the grout has set, then lightly grease them for easy removal. Ensure formwork is secure and watertight to prevent movement and leaking during the placing of the grout. For pump application, use sufficient formwork.</p>								
Mixing	<p>Pour water in given quantity (approximate 4.0 liters per 25.0 kg powder) into the mixing container. Add powder while mixing continuously. Mix thoroughly using a low speed drill (max. 400 rpm) and suitable paddle for at least 3 minutes until a smooth, uniform, and lump free consistency is achieved. Avoid air entrainment during mixing.</p> <p>EXCESSIVE AMOUNT OF MIXING WATER CAUSES MIXED GROUT TO BLEED OR SEGREGATE. AVOID RETEMPING BY THE LATER ADDITION OF WATER.</p>								
Application method	<p>Pour immediately after mixing into the prepared area, considering that the grout has the shortest distance to flow. Pour the grout continuously and ensure that air displaced by the grout is allowed to escape. When carrying out base plate grouting, ensure sufficient head of pressure is maintained to keep mortar flowing. Exposed part of the mortar surface should be kept as small as possible. Normal curing procedures for cement mortars should generally be observed for exposed grout until grout surface is ready to be finished, or until final set.</p> <p>DO NOT OVERWORK AND AVOID USING MECHANICAL VIBRATION.</p>								
Material consumption	<p>One 25 kg bag of PADRA-Flowcem GCG-235 with 4.0 liters of added water will yield approximately 12.50 liters fresh mortar. For 1 liter fresh mortar, on the other hand, 2.00 kg powder is required.</p>								
Application limits	<p>Use PADRA-Flowcem GCG-235 for grouting only</p> <table> <tr> <td>Minimum layer thickness per pour:</td> <td>20.0 mm</td> </tr> <tr> <td>Maximum layer thickness per pour:</td> <td>80.0 mm</td> </tr> <tr> <td>Minimum application temperature</td> <td>5 °C</td> </tr> <tr> <td>Maximum application temperature</td> <td>35 °C</td> </tr> </table>	Minimum layer thickness per pour:	20.0 mm	Maximum layer thickness per pour:	80.0 mm	Minimum application temperature	5 °C	Maximum application temperature	35 °C
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Cleaning	<p>All working tools can be clean with water while material is still fresh. Hardened material can only be removed mechanically.</p>								

Storage / Shelf life

Store out of direct sunlight, and protected from extreme heat and rain fall. Avoid excessive compaction. The shelf life for originally unopened package is 24 months from date of production.

Packaging

PADRA-Flowcem GCG-235 is available in 25 kg bag.



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Safety precautions

Product is caustic (cement). Protect skin and eyes from contact with fresh mortar. Wear gloves and goggles. In contact with eyes or mucous membrane, flush immediately with plenty of warm water and seek medical attention without delay.

This product should be handled carefully to minimize dust formation during mixing. Use a light mask if excessive dust is unavoidable. Dispose of in accordance with local regulations.

