Quality beyond Innovation

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HYPERFLOW PCR

Pre-Mixed Grout for Post-Tensioned Cable Ducts and Rock Anchoring

DESCRIPTION

HyperFlow PCR is a ready to use, high strength, highly flowable, non-shrink cementitious grout and rock injection. It requires only addition of water at site. It consists of Portland cement and special chemicals to achieved all the requirement properties to its purposed.

STANDARDS

BSEN 447

USES

- Post-tensioned cable ducts
- Repair of non-moving concrete cracks by injection
- Rock anchors
- Sheet pile anchors
- Sonic tubes in concrete piles

ADVANTAGES

- Ready to use, only requires addition of water
- Highly flowable and superior flow retention
- Non-shrink with controlled expansion
- High strength
- No bleeding and settlement
- Chloride free, no corrosion of metallic parts

PROPERTY	TEST METHOD	VALUE		
Component	-	Single		
Form	-	Powder		
Colour	-	Grey		
Fresh Wet Density	BSEN 445	2.00 kg/ltr +/- 0.05		
Flow (Marsh Cone)*	BSEN 445	W/P	0.34	0.32
		Initial (t0)	15 ± 3 sec.	
		After 30 min.(t30)	<25sec., 0.8 to < t30 < 1.2 t0	
Compressive Strength**	BSEN 445	7 Days	40 Mpa	50 Mpa
		28 Days	50 Mpa	60 Mpa
Flexural Strength**	BSEN 445	9 Mpa at 28 Days		
Expansion**	BSEN 934-4	Up to 5% positive expansion		
Bleeding**	BSEN 934-4	< 2%		
Chloride content	BSEN 480-10	Nil to BSEN 934-4		
Sedimentation**	CSTR No. 47	< 5%		

MIXING

Water/Powder ratio :0.32 to 0.36

For best result a mechanical powered grout mixer should be used. For quantities up to 50 kg slow speed drill fitted with a paddle can be used. Water should be measured accurately into mixer. **HyperFlow PCR** should be slowly added and mixed for 3 to 4 minutes. Ensure that the grout has a smooth and even consistency after mixing. For high volume grouting, use of high shear vane, professional grout mixer and pumps is recommended.

APPLICATION

FOR CABLE DUCTS:

Grouting process should start from one side of the cable duct homogenous consistency of **HyperFlow PCR** flows from consecutive air vent valve and outlet valves.

FOR SONIC TUBES IN CONCRETE PILES:

HyperFlow PCR should be pumped in sonic tube by tremie method. Pumping of grout should be continued till consistent quality of grout over flows from sonic tube. Grouting should take place using heavy duty grout mixer pump and flexible grouting hose. Grouting should be done with continuous flow.

FOR ROCK ANCHORS:

High pressure injection pump should be use, mixed grout should be injected within 20-40 minutes to ensure fully penetration of **HyperFlow PCR** into the crevices.

CURING

All exposed grout surfaces should be cured by using wet hessian. Alternatively, curing compound from UltraCure range can be used.

NOTE

In case of grout for post-tension cable ducts, maintain grout temperature at 20 +/- 2C (as per BSEN 445) to ensure better flow and retention properties. Water to powder ratio can be adjust outside the given range to get the desire flow properties of grout. Depending on fineness and consistency of cement, w/p can vary from 0.26 – 0.40.

PACKAGING

25 kg bag

YIELD

HyperFlow PCR	W/P ratio	water	Approx yield
25 kg	0.32	8.0 L	15.9 L
25 kg	0.34	8.5 L	16.4 L
25 kg	0.36	9.0 L	16.9 L

GENERAL INFORMATION
Shelf Life 12 months from date of manufacture when stored under warehouse conditions in original unopened packing. Extreme temperature/humidity may reduce shelf life.

CLEANING
Clean all equipment and tools with water immediately after use.

HEALTH and SAFETY
Gloves, goggles & suitable mask must be worn.

PRECAUTIONS
Contact with skin, eyes, etc. must be avoided. If swallowed seek medical attention immediately.

DISPOSAL
Do not reuse containers. To be disposed off as per local rules and regulations.

TECHNICAL SERVICE
Philippine SkyBird Industrial Corp. Services are available on request for on-site support to assist in the correct use of its products.