HYPERFLOW AID-1P

**Plasticising and Expanding Admixture for
Post-Tensioned Cable Duct Grouting for Type-1P Cement**

DESCRIPTION

HyperFlow Aid-1P is a non-shrink additive in powder form. It makes the grout mix cohesive and free from segregation and bleeding. It is design to allow uniform expansion while maintaining high fluidity.

STANDARDS

BSEN 934-4

USES

Used as an additive in cement, concrete to provide non-shrink properties. Applications include grouting of post-tensioned cable ducts, bearing plates, tunnel linings, sheet pile anchors, rock and soil anchoring, concrete crack injection, non-shrink concrete, etc.

ADVANTAGES

- Improved fluidity at reduced mix water content
- Prolong workability
- Reduces bleeding and segregation
- Good strength and adhesion
- Improve cohesion
- Protect against corrosion of pre-stressing wires

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	0.36	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%		

SURFACE PREPARATION

Ensure that the metal casing duct is leak-proof. Remove entire amount of water filled in the duct during pre-grouting check by air pressure. Check that air vents and valves are in good working condition.

MIXING

For best result a mechanical powered grout mixer should be used. For quantities up to 50-60 kg slow speed drill fitted with a paddle can be used. Water should be measured accurately into mixer. Slowly add cement and start mixing. HyperFlow Aid -1P should be slowly added and further 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

Mixed grout should be placed by continuous pouring from one side of the formwork. Place the grout within 20 minutes of mixing to gain full benefit of expansion process. Adopt usual placing or pumping procedure ensuring a continuous operation. Re-tempering of grout by adding extra water after stiffening is not recommended.

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

1.0kg pouch

DOSAGES

Normal dosage at 2.5-5% by weight of cementitious materials. Actual dosage to be confirmed after site trials

YIELD

OPC	0-5mm Sand	water	Hyperflow Aid-1P	Approx yield
40kg	nil	14.4L	1.0Kg	27L
40Kg	50Kg	16L	1.0Kg	48.5L
40Kg	100Kg	17.6L	1.0Kg	69.5L

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.