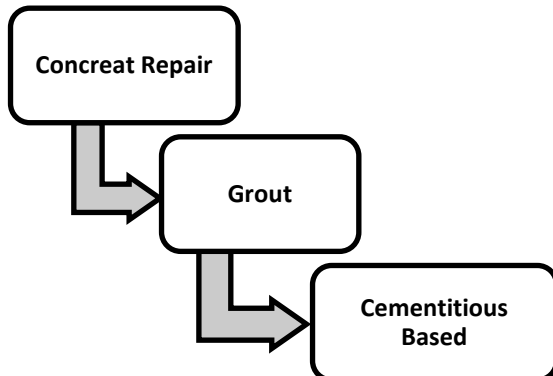


FAMILY TREE



PRODUCT DESCRIPTION

Single component, dry cementitious grout powder, formulated from cement, selected additives, well graded fillers and non-reactive aggregates that when mixed to water will produce excellent flow properties, shrinkage compensation, frost resistance, and high compressive strength. It is carefully manufactured to be Chloride Free product for bearing pads and for base plates where high strength grout is required.

FIELD OF APPLICATION

Area Type	: <input checked="" type="checkbox"/> Dry	<input checked="" type="checkbox"/> Semi-wet	<input type="checkbox"/> Submerged
Area Location	: <input checked="" type="checkbox"/> Internal	<input checked="" type="checkbox"/> External	
Type of Installation	: <input checked="" type="checkbox"/> Horizontal	<input checked="" type="checkbox"/> Vertical	
Area of Application	: <input checked="" type="checkbox"/> Bridge bearing pads	<input checked="" type="checkbox"/> Pile caps treatment	<input checked="" type="checkbox"/> Stanchion bases
	<input checked="" type="checkbox"/> Railing	<input checked="" type="checkbox"/> heavy stanchion bases	<input checked="" type="checkbox"/> Tie rod opening filler
	<input checked="" type="checkbox"/> Tie bar anchoring	<input checked="" type="checkbox"/> Bolts anchoring	<input checked="" type="checkbox"/> Pile top re-profiling
Thermal behaviour	: Excellent thermal behaviour.		

PROPERTIES

- High initial and ultimate early strength development allowing for rapid installation.
- High flow can be poured or pumped into variable gap widths down to 10 mm.
- Extremely dense and low permeability.
- Non-shrinkage grout.
- Easy to apply, single component, requires only addition of water.
- Chloride free.
- Suitable for hot weather conditions.

PREPARATION

Working Conditions	: 4° to 50°C.
Tools / Equipment	: Mechanically powered mixer, mixing plastic bucket.
Substrate	: The Substrate should be sound, clean and free from contamination. Surface Laitance should be removed by acid etching. All surfaces should be pre-soaked with clean water for a minimum period of 4 hours prior to grouting.
Priming	: All surfaces should be soaked with water enough to reach saturated surfaces prior to grouting.
Joints	: In general, the product shall not be placed above expansion or construction joints. NASA Flexseal shall be used to manipulate the joints.

MIXING

W/P ratio	: Approximately 13 – 14 litres/ 25 kg bag for Apollo Flo-Grout BP2 depending on consistency.
Mixing Speed	: 400 - 600 rpm.
Process	: Add the clean and fresh water to the mixing container. Start the mixer and add the powder slowly while mixing. Keep mixing the paste for a period not less than 4 - 5 minutes after the addition of the powder until a consistent, homogenous and lumps free mixture is achieved.
Points of Attention	: Do not add powder to the water without the mixer is started. Always mix sufficient amount that can be applied within the allowed open time of the adhesive after mixing.

APPLICATION

Thickness	: The product can be applied in a single layer at thickness between (10 -100) mm. For greater thickness, an (8 – 12) mm washed aggregate should be added at a ratio of (14 – 15) kg of washed aggregate to 25 kg of the product.
Coverage	: Approximately 14 – 15 litre/25 kg bag depending on consistency & type of application
Process	: <u>Bearing Plate</u> : Enough material should be available to achieve continuous fill and to complete the work. At low temperatures (below 8°C), warm water is recommended to achieve the early strength. And the formwork is recommended to be kept longer time. At high temperatures (35°C and above), cold water (less than 20°C) must be used for mixing. <u>Formwork:</u> As the mixed grout possesses high fluidity characteristics, all formworks and shutters should be water tight. This can be obtained by sealing underneath the formwork and at the joints by using appropriate mastic. The unrestrained areas should be kept at a minimum due to the expansion nature of Apollo Flo-Grout BP2.
Curing	: Apollo Flo-Grout BP2 is a cementitious material, it should be cured in a similar method to concrete. Curing can be conducted using a good concrete curing compound or by using wet hessian sheets covered with polyethylene sheets. Note: Notes: <ul style="list-style-type: none"> • At low temperatures (below 8°C), warm water is recommended to achieve the early strength. And the formwork is recommended to be kept longer time. • At high temperatures (35°C and above), cold water (less than 20°C) must be used for mixing.
Cleaning	: All tools / equipment shall be cleaned immediately after use with fresh clean water. Hardened materials should be cleaned mechanically. Care shall be taken not to damage the tools / equipment.

PACKING

Standard Package	: Apollo Flo-Grout BP2 is Available in 25 Kg plastic Bags.
Custom Package	: Special packages can be arranged for large requirements.
How to Order	: Specify the Product Name followed with a hyphen and package size.

STORAGE CONDITION

Shelf Life	: 24 months from the date of manufacturing.
Temperature	: 2°C and 50°C.
Points of Attention	: Store in shaded area and properly sealed in its original packing.

TECHNICAL PROPERTIES

PROPERTY	STANDARD	VALUE	
Testing Standard	ASTM & BS		
Testing Conditions	Tests were carried out in Apollo R&D laboratory with W/P = 0.25 @ 25°C		
Component		Single component	
Form		Powder	
Colour		Grey	
Compressive strength	ASTM C109/109M-11	1 day	≥ 30 MPa
		7 Days	≥ 60 MPa
		28 days	≥ 80 MPa
Flexural strength	BS 6319, Part 3 : 1990	28 day	≥ 14 MPa
Tensile strength	BS 6319, Part 7:1983	> 5 MPa @ 28 days	
Initial setting time	ASTM C191	7 hr @ 25°C	

This Technical Data Sheet is prepared based on extensive research and practical experience. With the varieties of the materials and conditions of application is out of our control, Apollo assumes no responsibility for the obtained results and / or damages caused by the usage of this product. Apollo Technical Service family is always available at your disposal for any advice and directions that might be required.



Apollo Flo-Grout BP2

Apollo Flo-Grout BP2 - 25 Kg – ASTM

Single component, non-shrink bearing pads precision cementitious grout

Final setting time	ASTM C191	11hr @ 25°C
Plastic Expansion characteristics	ASTM C827/C827M-10	Up to 2%
Bleeding	ASTM C940	Nil
Hardening stage expansion	ASTM C1090	Up to 0.3% @ 28 days
Fresh wet density		≈ 2.0 gm/ cm ³
Points of Attention	: Typical properties are obtained @ 3.75 litres/ 25 kg @ 25°C. Compressive strength @ 1 day is under restraint. Compressive strength and Flexural strength @ 7 & 28 days are under wet cure @ 25°C	

ATTENTION

PPE : It is recommended to use full PPE while working with the product to avoid any possibility of irritation to skin or eyes. In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

Hazardous Classification : Non-Hazardous.

Fire : Non-flammable.

APOLLO AT THE GLANCE

Apollo is confident with the technical solutions and high quality end products served to the customers.

Apollo invites you to explore other services and products:

- | | | |
|--|--------------------------------------|--------------------------------------|
| • R&D and manufacturing custom solutions | • Adhesives | • Bonding Agents Systems |
| • Building Finishing Systems | • Concrete Admixture | • Concrete Repair Systems |
| • Flooring Systems | • Grouts & Anchoring Systems | • Painting & Putty Systems |
| • Protective Coatings | • Sealant & Jointing Solutions | • Structural Strengthening Solutions |
| • Surface Treatment Solutions | • Tile Adhesive & Grouting Solutions | • Waterproofing Systems |

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