

ShaliGrout® 73

Single Component Free Flow Non-shrink High Strength Grout



Description

ShaliGrout® 73 is a high-strength, non-metallic, non-shrink grout designed for precision grouting and general construction applications. It can be mixed to a fluid, flowable, or plastic consistency requiring only the addition of clean water. It is formulated as a natural aggregate system with a shrinkage-compensating binder and is highly flow-able without sacrificing strength or performance capabilities. It can also be used for anchoring a wide range of fixings. These include masts, anchor bolts and fence posts.

Approvals / Standards

ASTM C 1107

Product Information

Form - Colour	Grey dry powder
Handling & Storage	Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air conditioned environment. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. Store in a dry environment off the ground.
Packaging	Available in 30 kg moisture resistant bags.
Shelf Life	6 Months from the date of manufacture when maintain in protected storage in original unopened sealed condition at 5 - 40°C.
Handling Precautions	As with all chemical products, care should be taken during use and storage to avoid contact with eyes mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. Keep away from children and animals. After opening the seal, always consume total material.

Technical Characteristics at 27°C, 60% RH

Compressive Strength (ASTM C 109) kg / cm ²			Setting Time, (ASTM C 191-A) hrs.	
			• Initial	3 - 5
			• Final	6 - 6.5
Age (days)	Flowable (w/p = 0.16)	Pourable (w/p = 0.15)	Water required per 30 kg bag, ltr*	
1	240 - 260	280 - 300	• Flowable consistency	4.80
3	450 - 500	480 - 550	• Pourable consistency	4.50
7	500 - 550	600 - 650		
28	600 - 650	680 - 730		
Flow Table Flow Rate, cm (BS Cone)			Approximate Yield for 30 kg bag, m ³ **	0.013
Flowable (w/p = 0.16) 27 - 30		Pourable (w/p = 0.15) 21 - 25	Height change, (ASTM C 1090) @ 1, 3, 7, 28 days, %	0.0 - 0.3

*Do not add water in an amount that will cause bleeding or segregation. More or less water may be required to achieve the desired placing consistency, depending on temperature and other variables. Do not add sand or cement to the grout since this action will change its precision grouting characteristics.

** Allowance should be made for wastage when estimating quantities required.

Age (Days)	Compressive Strength with addition of aggregates, kg / cm ² , w/p ratio 0.16		
	% of Aggregates (IS:516 - 1959)		
	50%	75%	100%
1	431	435	382
3	580	597	588
7	656	693	684
28	725	760	780

Field of Application

- Heavy duty grouting of machinery and equipment.
- Ball Mills in cement plants
- Petro-chemical & fertilizer units
- Bridge Bearing plates
- Bearing plates & Textile machineries
- Anchor bolts and bars
- DG sets Base foundation
- Fence posts

Advantages

- Highly fluid and extremely place-able for easy field use.
- High strength for maximum load bearing.
- Non-Shrink with minimum positive expansion for high tolerance performance.
- Non-bleeding and non-segregating at a fluid consistency.
- Does not contain any chlorides or additives which may contribute to corrosion of base structure.
- Total shrinkage compensation, which provides a maximum bearing surface for the greatest overall support.
- Rapid strength gain to minimize turnaround time for equipment installation
- Excellent working time at high ambient temperatures.
- Economical, greater volumes of grout can be mixed and handled.

Application Methodology

- Ensure that concrete surface is clean, sound, rough and is free from any standing water, oil, dirt, debris, paint, unsound concrete or other contaminants.
- Ensure that surface temperature & ambient temperature is not $< 5^{\circ}\text{C}$ and $> 40^{\circ}\text{C}$.
- As a precautionary measure, remove all residue with a vacuum cleaner or pressure washing.
- Pre-soak the concrete with water to ensure a saturated surface during the grouting process.
- Mix 30 kg **ShaliGrout[®] 73** with 4.65 L water for flowable consistency. Where grouting is to be done for deeper thickness, > 100 mm (bolt pocket grouting), add about 15 - 30 kg of aggregate per 30 kg of **ShaliGrout[®] 73**.
- Use requisite quantity of water to achieve desired flow level of **ShaliGrout[®] 73**. Do not add excess water as this may lead to bleeding & segregation. Do not add sand / cement to **ShaliGrout[®] 73** as this may change its properties.
- Pour grout immediately after mixing from the one side into a watertight shuttering around the machine basement / structure. Ensure that the air dispensed by pouring grout escapes and air entrapment is avoided. The grouting should be continuous and maintain sufficient pressure head to keep grout flowing. To prevent grouts from leaking out, use wooden or MS shuttering material with a polythene sheets or coating of **ShaliSlip**.
- When grouting base-plate, pour grout into the head box and allow to flow under the plate. Straps pre-placed under the plate will aid in working the grout across. Grout should be placed at minimum of 25 mm thick and a maximum of 150 mm per lift when placed in a large mass. This will avoid any crack formation after curing.
- Bring all **ShaliGrout[®] 73** materials as well as foundation and base-plate as close to room temperature as possible. Cold temperatures will significantly reduce flow characteristics and will enhance difficulty of base-plate grouting. Higher temperatures will increase initial flow but cut down on working time.
- Ensure proper curing of **ShaliGrout[®] 73** to achieve optimal durability / performance of grout. Wet cures the grout until forms are stripped. Then cure the grout with high solid curing compounds such as **ShaliCure**. Improper curing may lead to crack formation for depth higher than 100 mm. Used of gravels is recommended for bigger depth.
- Ensure potable water during mixing with **ShaliGrout[®] 73**.

Curing

- Curing is essential to optimize physical properties of the concrete and minimize plastic shrinkage. Continuously moist cure for a minimum period of 7 days.
- Alternatively, moist cure for a minimum period of 24 hours and apply a curing compound that complies with ASTM C 309.
- Curing is particularly critical in rapid moisture loss conditions such as high temperatures, high winds and low humidity.

Precautions

- Additions of cement or other materials (other than gravel when extended as previously noted) will eliminate the designed product qualities.
- Water quantities may be affected by temperature, mixing method and batch size.
- Use a consistent water temperature when mixing multiple batches, to prevent performance fluctuations.

Value base of product data

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control and different test methods.

Material Health & Safety

- Use mask, nose cover and hand gloves during application.
- Clean hands with soap water after application.
- Avoid contact with skin / eyes. In case of unlikely contact with eyes, rinse immediately with plenty of clean water, then cleanse with soap and lukewarm water and seek medical advice. Do not use solvent to clean the contacted area.
- Prevent swallowing. In case of unlikely swallowing, seek medical attention immediately. Do not induce vomiting.

Cleaning & Maintenance

Tools and mixer may be cleaned with water before of **ShaliGrout® 73** has hardened; otherwise, mechanical cleaning will be required.



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Product Range

- Waterproofing and Insulation
- Road Surfacing
- Sealants and Additives
- Pipeline Coating
- Protective / Anti-Corrosive Coating
- Epoxy Flooring
- Grouts / Admixtures
- RestoFix- Repair / Rehabilitation
- Other Construction Chemicals



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