Ressi NSG 720

Early High Strength Non-Shrink Cementitious Grout

RESSICHEM®
adding life and value to your property

Ressi NSG 720 is a cement based nonmetallic, non-shrink, free flowing grout that maintains a fluid consistency for a longer duration. It is an early high strength cementitious grout designed to gain high strength within 24 hours. **Ressi NSG 720** is developed to provide a flowable grout for complete filling of bolt pockets, gaps between the base plate and concrete such as bridge bearings, machinery baseplates stanchion base plates, joints between precast panels, rail and anchor bolts etc. can be used for filling precast joints and tie holes with adjustable consistency. Can be used for reinstating damaged structural elements by placing within the formwork.

ADVANTAGES

- Ready to use only requires addition of water.
- Flowable and self levelling.
- Can fill intricate voids.
- Early high strength gain.
- High ultimate strength.
- No bleeding or segregation.
- Controlled expansion.

SURFACE PREPARATION

Surface should be clean, sound, free from oil, grease, laitance, and loose particles. Saturate with water at least 3 – 4 hours prior to pouring the grout. Any standing water should be removed just prior to placing of grout. Ensure that there is no standing water in bolt pockets. Material surfaces should also be clean and free from rust, oil, and grease.

MIXING

Ressi NSG 720 should be mixed using a suitable mechanical grout mixer. For smaller volumes it is recommended to use a drilling machine fitted with a paddle. For large works a high shear vane grout mixer is to be used. Powder should be added to the premeasured water, a free flowing and self levelling grout can be obtained at a higher water powder ration (This should however be tested on a smaller area prior to large area applications). Mix until a uniform consistency is achieved. Chilled or cold water will give enhanced flowability and a longer open time for application. **Ressi NSG 720** can be used as dry pack mortars of various consistency by adjusting the water content of the mix.

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TYPICAL PROPERTIES AT 25°C

Property	Test Method	Value	
Component	-	Single	
Form	-	Powder	
Color	-	Grey	
Fresh Wet Density	-	2.20 kg / Ltr ± 0.05	
Water Ratio (W/P)	-	14 % (0.14)	
Pot / Working Time	-	20 min @ 25°C	
Flow / Spreadability	ASTM C 1437	300 mm	
Compressive Strength	ASTM C 109	1 Day	35 N / mm^2
		3 Day	55 N / mm^2
		7 Days	65 N / mm^2
		14 Days	75 N / mm^2
		28 Days	85 N / mm^2
Flexural Strength	BS-6319-3	14 Days	11 N / mm^2
		28 Days	13 N / mm^2
Expansion (Plastic State)	ASTM C940	Up to 2% positive expansion	
Bleeding	ASTM C940	Nil	
Setting Time	ASTM C 191-01a	initial: > 2hrs; Final: < 4hrs	

Typical results under laboratory conditions

APPROXIMATE FLOW DISTANCE (MM) AT 25°C GROUT TEMPERATURE

Water Powder Ratio	Gap Depth	Head Height	Head Height
	mm	10 cm	25 cm
14%	10	280	1200
	20	800	2500
	30	1400	2800
	40	2200	> 3000

Flow distance will be affected by surface conditions, temperature, height of head and mixing time.

TECHNICAL DATASHEET RESSI NSG 720

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APPLICATION

Place the mixed grout within 30 mins to gain full advantage of the expansion. Bolt pockets should be grouted first. Stop the grout 5-10 mm below the top surface of the bolt pocket. Grouting of the base plate should be carried out continually. Ensure to have enough grout prior to starting. Start pouring the mixes grout from one side of the formwork to prevent entrapping of air. This can be achieved by pouring the grout to the shortest distance. It is advisable to use heavy duty diaphragm pump when large volumes are to be placed. During application ensure entrapped air can escape through relief holes. Maintain continuous head during the grouting. Grout flow should not be interrupted. Check for any grout loss through the form work or between any unsealed joints. Plus, the same using an appropriate plugging material.

CURING

To prevent rapid surface drying and crazing, exposed surface of the grout should be cured with wet burlap or moist curing cloth or use a suitable curing compound.

NOTE:

Use **Ressi NSG 720** for minimum gap of 10mm and maximum thickness of 100mm. For thickness above 100mm, **Ressi NSG 720** can be mixed with hard, clean, surface saturate by dry (SSD), graded 10mm aggregate in the ratio of 1:1 or 1:0.5 by weight depending on consistency required. Exact proportion should be determined by conducting site trials. Ambient temperature will affect setting time and strength gain. Use of chilled water will ensure better flow and retention properties.

PACK SIZE

Ressi NSG 720 is available in 20 KG Bags.

YIELD

10.6 Ltr / 20 KG bag with W/P ratio 0.14

LIMITATIONS

Ressi NSG 720 should not be used in unrestrained areas as it may lead to the cracking of grout. Shoulder space between baseplate and formwork should be as minimum as possible. Grout surface on the shoulders should be as minimum as possible. Grout surface on the shoulders should be sprinkled with aggregates or retained to minimize cracks.

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SHELF LIFE

06 Months from date of manufacturing when stored under warehouse conditions in original unopened packaging. Extreme temperature / humidity may reduce shelf life.

HEALTH AND SAFETY

Clean all equipment and tools with water immediately after use. Gloves goggles and suitable masks must be worn. Contact with skin, eyes etc. must be avoided. If swallowed seek medical attention immediately. This material is regarded as nonhazardous for transportation. Do not reuse containers and packaging materials. To be disposed as per local rules and regulations. For further health and safety information please refer to material MSDS.

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NOTE:

If printed bags are not available, neutral bags with label. Lot number and manufacturing date to be stamped at the back of each bag.



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