

**Ressi NSG 710** is a cement based nonmetallic, non-shrink, free flowing grout that maintains a fluid consistency for a longer duration.

## USES

**Ressi NSG 710** 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.
- ✓ High 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 710** 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 710** can be used as dry pack mortars of various consistency by adjusting the water content of the mix.

## TYPICAL PROPERTIES AT 25°C

Property	Test Method	Value		
Component	-	Single		
Form	-	powder		
Color	-	Grey		
Fresh Wet Density	-	2.20 kg / Ltr ± 0.05		
Consistency	ASTM C 1107	W/P	0.14	0.16
			Flowable*	Fluid**
Compressive Strength	ASTM C 109	1 Day	30 N / mm <sup>2</sup>	25 N / mm <sup>2</sup>
		3 Day	45 N / mm <sup>2</sup>	40 N / mm <sup>2</sup>
		7 Days	55 N / mm <sup>2</sup>	50 N / mm <sup>2</sup>
		28 Days	70 N / mm <sup>2</sup>	65 N / mm <sup>2</sup>
Flexural Strength	BS-6319-3	7 Days	8 N / mm <sup>2</sup>	7 N / mm <sup>2</sup>
		28 Days	10 N / mm <sup>2</sup>	9 N / mm <sup>2</sup>
Expansion (Plastic State)	ASTM C940	Up to 2% positive expansion		
Bleeding	ASTM C940	Nil		
Setting Time	ASTM C 191-01a	initial: > 4hrs; Final: < 8hrs		
*Flow 125-140% as per ASTM C 1437				
** Flow < 30 Seconds as per ASTM C 939				

Typical results under laboratory conditions

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

Water Powder Ratio	Gap Depth	Head Height	
	mm	10 cm	25 cm
14%	10	280	1200
	20	800	2500
	30	1400	2800
	40	2200	> 3000
16%	10	800	2400
	20	1700	2900
	30	2800	3100
	40	>2900	>3200

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

## APPLICATION

Place the mixed grout within 15 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 mixed 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 710** for minimum gap of 10mm and maximum thickness of 100mm. For thickness above 100mm, **Ressi NSG 710** 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 710** is available in 20 KG Bags.

## YIELD

10.4 Ltr / 20 KG bag with W/P ratio 0.16

## LIMITATIONS

**Ressi NSG 710** 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.

## 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.