



Novo Grout 50

Data Sheet

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High Strength Non Shrink, Free Flow Cementations Grout.

DEFINITION

Novo Grout 50: a cementations grout is supplied ready use powder only the addition of a controlled amount of clean water produces a flowing non-shrink grout for gap thicknesses up to 100mm.

Novo Grout 50 is a blend of Portland cement, graded fillers and chemical additives which import controlled expansion in the plastic state whilst minimizing water demand. The low water demand ensures high early strength. The graded filler is designed to assist uniform mixing and produce a consistent grout.

ADVANTAGES

1. Gaseous expansion system compensates for shrink and settlement in the plastic state.
2. Prepackaged material overcomes potential on-site batching variations.
3. Develop high early strength without chlorides use.
4. High ultimate strength and low permeability ensure the durability of the hardened grout.

FIELDS OF USE

Novo Grout 50 is used for

1. Filling gab under steel base plates in steel structures and production lines.
2. Fixing big anchor bolts in concrete structures.
3. Filling gabs under base plates in bridges.
4. Repairing of columns and concrete elements.

PROPERTIES @ 25 C°

Color	White , grey , all required colors
Density	2100kg/ m ³
Compressive strength BS 1881 Part 116 1983 Or ASTM C - 579	29 ± 2 N/mm ² @ 1 day 50± 2 N/mm ² @ 7 day 57 ± 2 N/mm ² @ 28 day
Flexural strength BS 4551 1980 Or ASTM C -78	3.0 N/mm ² @ 1 day 8.5 N/mm ² @ 7 day 10.5 N/mm ² @ 28 day
Time for expansion start finish	15 minutes 2 hours
Fresh wet density	2.10±0.05 gm./cm ³
Expansion characteristics	An expansion of up to 1% overcomes plastic settlement in the unset
Shelf life	12 months in suitable conditions of storage.

DIRECTIONS OF USE

Application instructions:

- The surface onto which the grout will be applied, should be scabbled to remove laitance and expose aggregate.
- Do not use bush hammers or similar preparation equipment that can crush the aggregate but leave it in place. The surface must be free of oil, dust, dirt, paint, curing compounds, etc.
- Soak area to be grouted, it is watered for **24** hours before grouting to minimize localized absorption and to assist in the free flow of grout.
- Surfaces should be damp but free of standing water.
- Particular attention should be paid to bolt holes to assure that they are water-free.
- Use oil-free compressed air to blow out bolt holes and pockets as necessary.
- Base plate and anchor bolts must be clean and free of oil, grease and paint...etc. Set and align equipment. If shims are removed after the grout has set lightly, greased them for easy removal. Be sure that formwork is secure and watertight; to prevent movement and leaking during the placing and curing of the grout.
- The area should be free from excessive vibration. Shut down adjacent machinery until the grout has hardened.

In hot weather, base plates and foundations must be shaded from direct sunlight. Bags of grout should be stored in the shadow before use.

In cold weather, the temperature of base plates and foundations should be raised to >10°C.

Mixing: In hot weather, use cool water to bring the mixed grout temperature to <30°C.

In cold weather, use warm water to raise the mixed grout temperature to >10°C.

Damp down the inside of the grout mixer with water before mixing the initial batch of **Novo Grout 50**. Ensure that the mixer is damp but free from standing water. Add the pre-measured quantity of water. (4-5liter water/ 25 kg powder approximately)

Slowly add the **Novo Grout 50**, mixing continuously.

Mix for at least 5 minutes until a smooth, uniform, lump-free consistency is achieved.

STANDARDS

Novo Grout 50 meets the following standards:-

- 1- ASTM C1107 type A.
- 2- ASTM C579 in comp Strength.
- 3- ASTM C/78 in flexural Strength.
- 4- ASTM C-827 + (1-4%) increasing in volume for unconfined areas.

Limitation of using and applying **Novo Grout 50**

- 1- Min Gab width = 20 mm & width 100 mm.
- 2- In care of gab width more than 100 mm mix the **Novo Grout 50** with 1: 1 clean aggregate of 12 mm six.
- 3- Max. Exposed distance around the perimeter of the steel base plate is 50mm except the pouring side may be increased.
- 4- In hot weather (30°C and above)
 - a- Eliminate application during hottest time and in direct Sunlight. Also use cold water (10-15°C) in mixing grout.
 - b- Store unmixed material in a cool (preferably temperature Controlled) environment, avoiding shade protection in necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.

GROUT PLACING

Pour **Novo Grout 50** within 10 - 15 minutes 25°C under shed condition to gain all properties of the grout.

Refer to table (1) for gab width, max. Flow distance and Head of casting @ 25 °C under shed.

Gab Width mm	Max. Flow distance mm		
	Head mm		
	50	100	250
20	200	950	1700
30	400	1500	2500
40	600	2500	3000
50	850	2900	3200

Notes

- 1- Fill anchor bolts pockets 25mm less than substrate level before grouting under base plates.
- 2- In large volumes, heavy duty diaphragm pump may use or hand Grout pump.

STORAGE CONDITIONS

- Store out of direct sunlight, clear of the ground, on pallets protected from rainfall. Avoid excessive compaction.
- Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
- For specific storage advice, consult NOVO's Technical Services Department.

PACKING

Novo Grout 50 25 Kg bags

HEALTH AND SAFETY

- **Novo Grout 50** is non-toxic, non-corrosive and any splashes on the skin should be washed with water.
- If contact with eyes occurs wash well with water immediately and ask for medical advice.