

# Novo Grout 60

Data Sheet

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## High Strength, Non Shrink and Free Flow Cement Grout.

### DEFINITION

**Novo Grout 60** is a cement grout supplied as a ready to dry powder. The addition of a controlled amount of clean water produces a flowing non-shrink grout for gap thicknesses up to 100mm.

**Novo Grout 60** is a blend of Portland cement, graded fillers and chemical additives which impart 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 onsite batching variations.
3. Develop high early strength without the use of chlorides.
4. High ultimate strength and low permeability ensure the durability of hardened grout.

### FIELDS OF USE

**Novo Grout 60** is used to:-

1. Fill gap under steel base plates in steel structures and production lines.
2. Fix big anchor bolts in concrete structures.
3. Fill gabs under base plates in bridges.
4. Repair of columns and concrete elements.

### PROPERTIES @ 25 °C

<b>Color</b>	White , grey , all required colors
<b>Compressive strength BS 1881 Part 116 1983 Or ASTM C - 579</b>	30 ± 2 N/mm <sup>2</sup> @ 1 day 52 ± 2 N/mm <sup>2</sup> @ 7 day 58 ± 2 N/mm <sup>2</sup> @ 28 day
<b>Flexural strength BS 4551 1980 Or ASTM C -78</b>	3.0 N/mm <sup>2</sup> @ 1 day 8.5 N/mm <sup>2</sup> @ 7 day 10.5 N/mm <sup>2</sup> @ 28 day
<b>Time for expansion start finish</b>	15 minutes 2 hours
<b>Fresh wet density</b>	2.2±0.05 gm./cm <sup>3</sup>
<b>Expansion characteristics</b>	An expansion of up to 1% overcomes plastic settlement in the unset.
<b>Shelf life</b>	12 months in suitable conditions of storage.

### DIRECTIONS OF USE

#### Application instructions:

- The surface onto which the grout is to be applied should be scrubbed 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 from standing water.
- Particular attention should be paid to bolt holes to ensure that these are water-free.
- Use oil-free compressed air to blow out bolt holes and pockets if 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, grease them for easy removal. Be sure that formwork is secured and watertight to prevent movement and leaking during the placing and curing of grout.
- The area should be free of 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 shade 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 make the mixed grout temperature <30°C.

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

Damp down the inside of grout mixer with water before mixing the initial batch of **Novo grout 60**. Ensure the Mixer is damp but free from standing water. Add the pre-measured quantity of water. (4-5 liter water/25 kg) approx...

- Slowly add the **Novo Grout 60**, mixing continuously. Mix for at least 5 minutes until a smooth, uniform, lump-free consistency is achieved.

## STANDARDS

**Novo Grout 60** 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 60**

- 1- Min Gab width = 20 mm & width 100 mm.
- 2- In case of gab width more than 100 mm mix **Novo Grout 60** with 1: 1 clean aggregate of 12 mm.
- 3- Max. Exposed distance around the perimeter of steel base plate is 50mm except the pouring side may be increased.
- 4- In hot weather (30°C and above)
  - a- Eliminate application during the 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 if 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 60** 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- If gap is 10 cm or more, then add 1: 1 max. **Novo Grout 60** is washed and soaked aggregate of 12mm size. This does Minimize Exothermic.
  - Refer to **NOVOCHEM** for more Technical details. Per packed supply of this grout can be prepared as special order.
- 3- In large volumes, heavy duty diaphragm pumps or hand Grout pump may use.

## STORAGE CONDITIONS

- Store out of direct sunlight, clear of the ground, and 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 60** 25 Kg bags

## HEALTH AND SAFETY

- **Novo Grout 60** 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.

