

Strugrout® N880

High Strength, Non-Shrink Cementitious Construction Grout

Uses

Strugrout N880 is an exceptionally high strength grout designed for grouting beneath bridge bearings, parapet posts and flanged lighting columns. It can also be used for wide range of fixings. These include:

- Machine beds and base plates.
- Stanchion bases, struts, railings, and guardrail assemblies.
- Filling distance between concrete walls or other sections.
- Filling of shutter tie rod openings.
- Anchoring of tie bars, and bolts.
- Pile top re-profiling.

Advantages

- Non-shrink
- High early and ultimate compressive strengths
- Good flow, particularly at low temperatures
- Low permeability ensures durability
- Can be poured or pumped

Standards compliance

Strugrout N880 complies with ASTM C1107.

Description

Strugrout N880 is a ready to use dry powder supplied in 25kg moisture resistant bags. Strugrout N880 has been formulated specifically for grouting of bridge bearings and parapet post base plates.

The addition of a controlled amount of clean water produces a free-flowing grout with high early and ultimate strengths as well as long term durability, suitable for use in section thicknesses 10mm to 100mm. Thicker sections can be achieved by incorporating clean, dry 10mm aggregate.

Properties

Appearance	Gray Cementitious Powder
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Dry Specific gravity (gr/cm ³)	Approx. 1.70 @ 20°C	
Fresh Wet Specific gravity (gr/cm ³)	Approx. 2.02 @ 20°C	
Compressive strength (Mpa) (ASTM C109/109M-02)	1 Day	35
	7 Days	60
	28 Days	80
Flexural strength (Mpa) (BS6319, Part 3 : 1998)	1 Day	4
	7 Days	8.5
	28 Days	12
Time to Expansion	Start: 15 minutes	
	Finish: 3 hours	
Expansion (ASTM C827-87)	Between 2% to 4% @ 24 hours	
Total chloride ion content (as % of mass of cement)	< 1%	
Application temperature	4 - 50°C	
Service temperature	-20 to 200°C	

Instructions for use

Preparation:

- Concrete surface

The substrate surface must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes and fixing pockets must be blown clean of any dirt or debris.

- Pre-soaking

For a minimum of 2 hours prior to grouting, the area of cleaned substrate should be flooded with fresh water. Immediately before grouting takes place, any free water should be removed. Particular care should be taken to blow out all bolt holes and pockets.

- Base plate

It is essential that this is clean and free from oil, grease or scale. Air pressure relief holes should be provided to

Strugrout N880

allow venting of any isolated high spots.

- Leveling shims

If these are to be removed after the grout has hardened, they should be treated with a thin layer of grease.

- Formwork

The formwork should be constructed to be leakproof. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints. In some cases, it is practical to use sacrificial semi dry sand and cement formwork. The formwork should include outlets for pre-soaking.

- Unrestrained surface area

This must be kept to a minimum. Generally, the gap width between the perimeter formwork and the plate edge should not exceed 75 mm on the pouring side and 25 mm on the opposite side. It is advisable where practical to have no gap at the flank sides.

Mixing:

For best results a mechanically powered grout mixer should be used.

Consistency of mixed grout:

The quantity of clean water required to be added to a 25 kg bag to achieve the desired consistency is:

Trowellable: 2.750-3.250 liters

Flowable: 3.250-3.750 liters

The selected water content should be accurately measured into the mixer. The total contents of the Strugrout N880 bag should be slowly added and continuous mixing should take place for 5 minutes. This will ensure that the grout has a smooth even consistency.

Grouting:

At 25°C place the grout within 15 minutes of mixing to gain full benefit of the expansion process. Strugrout N880 can be placed in thicknesses up to 100 mm in a single pour when used as an underplate grout. For thicker sections it is necessary to fill out Strugrout N880 with well graded 10mm, silt free aggregate to minimize exotherm. If bulking with aggregate is used the ratio shall not exceed 1:1. The properties of a bulked grout will differ from those published in this data sheet. Any bolt pockets must be grouted prior to grouting between the substrate and the base plate. Continuous grout

flow is essential. Sufficient grout must be prepared before starting. The time taken to pour a batch must be regulated to the time taken to prepare the next one. Pouring should be from one side of the void to eliminate any air or pre-soaking water becoming trapped under the baseplate. It is advisable to pour the grout across the shortest distance of travel. The grout head must be maintained at all times so that a continuous grout front is achieved. Where large volumes have to be placed Strugrout N880 may be pumped. A heavy duty diaphragm pump is recommended for this purpose. Screw feed and piston pumps may also be suitable.

Curing:

On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of Strucure® curing membrane, or continuous application of water and/or wet hessian.

Cleaning:

Strugrout N880 should be removed from tools and equipment with clean water immediately after use.

Packaging

Strugrout N880 is available in 25 kg bags.

Storage

Strugrout N880 has a minimum shelf life of 12 months at 20°C if kept in a dry store in the original, unopened packs. The shelf life will be reduced at higher ambient temperatures.

Precautions**Health and safety:**

Strugrout N880 is alkaline and should not come into contact with skin and eyes. Avoid inhalation of dust during mixing. Gloves, goggles and dust mask should be worn. If contact with skin occurs, wash with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

Fire:

Strugrout N880 is non-flammable.