

100 NEWTON GROUT 100 NEWTON GROUT AW

Product code

TG102, TG134, TG115, TG116, TG137 packaging listed overleaf.

Description

100 Newton Grout is an ultra high strength grout specially formulated using a Portland cement powder mix. The mix design consists of a blend of fine and ultra-fine cements, high quality graded sands and a set of synergistic admixtures. The mix design includes special shrinkage compensating components, which give a non-shrink grout in both the plastic and hardened states. Powerful plasticising agents produce a highly flowing grout at low water content. A highly anti-washout underwater version is also available.

The product is pre-packaged ready for onsite mixing, only requiring measured water addition. The material readily mixes with water to produce the ultra high strength grout that is easily placed to give exceptional structural support and vibration resistance.

100 Newton Grout is chloride free and can be safely used in contact with reinforcing steel and structural steel elements. The specialised mix design enables placement at low water content leading to good freeze-thaw stability, low water absorption plus resistance to oil, sea water and mild alkali attack.

Placement thickness may be in the nominal range of 10mm to 100mm. 100 Newton Grout is suitable for pumping applications, pumping trials are recommended prior to site application to ensure pumping equipment is suitable, alternatively consult our Technical Services Department for guidance on suitable plant.

Uses include: Ultra high strength grout and support systems for:
 Crane rail tracks.
 Stanchion bases.
 Vibrating machinery bed plates.
 Ground anchors.
 Bridge bearing seats.
 Off shore structures repairs.
 Wind turbines bases.
 Underwater grouting projects.

Typical Grout Properties @ 20°C

Water addition at 18% water to powder.

| Strength profile in N/mm ² | | | | |
|---------------------------------------|-------|--------|--------|---------|
| Age | 1 day | 3 days | 7 days | 28 days |
| Compressive | 60 | 80 | 100 | 110 |
| Flexural | 8 | 16 | 20 | 25 |
| Tensile | 4 | 6 | 8 | 9 |

Typical Grout Properties @ 5°C

Water addition at 18% water to powder.

| Strength profile in N/mm ² | | | | |
|---------------------------------------|-------|--------|--------|---------|
| Age | 1 day | 3 days | 7 days | 28 days |
| Compressive | 30 | 70 | 90 | 100 |
| Flexural | 4 | 5 | 8 | 11 |
| Tensile | 3 | 4 | 5 | 6 |

Additional Properties @ 20°C

Water addition at 18% water to powder.

| | |
|----------------------------------|---------------------------|
| Density | 2180kg/m ³ |
| Coefficient of Thermal Expansion | 11 x 10 ⁻⁶ /°C |
| Compressive Modulus | 32kN/mm ² |
| Initial Set | 220 minutes |
| Final Set | 300 minutes |

Specification Outline

Grouting shall be carried out using 100 Newton Grout as manufactured by Parex Ltd. The product must be stored, handled and placed in accordance with the manufacturer's instructions.

Quality Assurance

Parex Ltd is a firm of Assessed Capability. The Company's quality system conforms to BS EN ISO 9001:2008 and is assessed by UK CARES LTD.

Standards

100 Newton Grout has been tested in accordance with the appropriate parts of the following standards:

- EN 12390, BS 6319
- Corps of Engineers Specification for Non-Shrink Grout CRD C621

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Instructions For Use

Preparation

Formwork should be erected and made grout-tight. The formwork must be designed with sufficient hydrostatic head to ensure grout flow into and across the grouting area. Saturate the grouting area with water. Leave for 1 hour and then blow out any surplus water.

Mixing

Pour the required quantity of clean water (2.7 litres per 15kg pail, 4.5 litres per 25 kg bag or 180 litres per 1 tonne bulk bag) into the mixing vessel for each complete unit of 100 Newton Grout to be used. Slowly add the powder to the water whilst continually mixing. Mechanical mixing should be carried out using either a high torque slow speed drill with a Grout Stirrer or a grout mixer set on slow speed. (High speed or colloidal mixing may cause thixotropy leading to loss of flow). **This material is not suitable for mixing by hand.** It is of utmost importance that the product is mixed thoroughly enough that a grout consistency is obtained **without** the addition of further water. Fresh grout should be allowed to stand until the air entrapped by mixing has been released.

Placing

Grout should be placed within 10 minutes of mixing or 30 minutes if kept mobile prior to placing. Continuous placing is important, pouring from one side of the formwork until the grout appears at the opposite side of the grouting area. Do not disturb once grouting has been completed. 100 Newton Grout may be placed at temperatures between 5°C and 35°C. For placing at temperatures outside this range contact our Technical Services Department for advice.

Curing

Placed grout, which is exposed, should be cured in accordance with good concrete practice including water spray and the spray applied curing membrane Polycure.

Precautions

Health and Safety

100 Newton Grout is alkaline when mixed with water and should not come into contact with skin or eyes. Avoid inhalation of dust during mixing and wear safety glasses, dust mask and gloves. If skin contact occurs wash thoroughly with clean water. Should eye contact occur rinse immediately with plenty of clean water and seek medical advice. Full health and safety data are given in Product Safety Data Sheet.

Fire

100 Newton Grout is non-flammable.

Yield

15kg pail will yield approximately 8 litres of mixed grout at the recommended water addition.
1 tonne bulk bags will yield approximately 540 litres (0.54 m³)

Storage And Shelf Life

100 Newton Grout will have a storage life of 6 months in unopened bags when kept in dry conditions at a temperature between 5°C and 45°C. Storage at higher temperatures and/or high humidity may reduce shelf life.

Packaging And Ordering

100 Newton Grout is supplied as follows:

| | |
|------------------|--------------------|
| 15kg Pail | Product Code TG102 |
| 25kg Bag | Product Code TG134 |
| 1 tonne bulk bag | Product Code TG115 |

An anti-washout modified version is available on request for under water applications.

| | |
|------------------|--------------------|
| 25kg Bag | Product Code TG137 |
| 1 tonne bulk bag | Product Code TG116 |

For further information and sales please contact your local Parex office as listed below.

Parex Ltd products are guaranteed against defective materials and manufacture. Products are sold subject to the Parex Ltd Terms and Conditions of Sale, copies of which are forwarded on invoice and are available on request. Parex Ltd endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.