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# MULTIGROUT 815 N.P.

## Natural Aggregate, High Strength, Non-Shrink, Flowable Grout for Bulk Grouting

**Specification Type**
Meets requirements of CRD-C 621, ASTM C827, ASTM C 109-80 and CRD 611-80 specifications.

**Description**
MULTIGROUT 815 N.P a premixed ready to use dry grout with a precise blend of graded siliceous and pea gravel aggregates, controlled chemicals, incorporating shrinkage compensating ingredients and blended with Portland Cements to produce a flowable non-shrink grout. It is grey coloured, non-oxidizing and has no added chlorides or nitrates.

**Typical Applications**
* In all applications where excessive grout thickness is a criteria and a natural aggregate non-shrink grout is specified
* For bulk grouting - grouting thickness' in excess of 100mm
* To reduce heat of hydration in high volume grout pours
* In excessively large bolt hole pockets

**Advantages**
* MULTIGROUT 815 N.P. provides precision support under load bearing elements such as machine base plates, crane and transporter rails, stanchions and column bases, anchor bolts, precast units, bridge bearings and for repairing of honeycomb in concrete, etc
* MULTIGROUT 815 N.P. a precision grout for use when flowable consistency is required and when the principal requirement is a shrink free grout.
* **High Early Strength** - complies to ASTM C 109-80 specification. Facilitates rapid installation and early operation of machinery
* **Non-Shrink** - meets CRD-C 621 specification. A non-shrink grout that hardens, free of bleeding, settlement or drying, shrinkage and maintaining tight contact with the underside of grouted elements.
* **Flowable Consistency** - meets CRD-C 226-80 specification. A grout when mixed and placed at flowable consistency remains free from segregation and bleeding (by flow table test method)
* I**ron Free** - a non-metallic aggregate grout used where an appearance similar to concrete or mortar is required
* **Durability** - a dense and ultimate high strength grout which contains no gas generating or air release agents such as aluminium powder, fluid coke, etc It is durable and withstands repetitive loading requirements.

**Typical Properties**
**Stiffening Test**

| | |
|---|---|
| Initial Set: | Approximately 2 hours at 20° C |
| Final Set: | Approximately 2 hours at 20° C |
| Flow Characteristics : | Flowable meets CRD - C 226 - 80 Specification |
| Shrinkage: | Non-shrink - meets CRD-C 621 Specification |
| Flashpoint : | Not applicable |
| Operating Temperatures: | Between 5° C to 200° C. Permissible for use with equipment exposed to the above temperature parameters |
| Storage Life: | Up to 1 year when stored under cover and in dry conditions |

**Strength Development**
The strength of MULTIGROUT 815 N.P. is dependent on water demand, curing and age of hardened grout. To determine the earliest the equipment or machinery can be put into operation, the above must be considered. Protect from freezing until fully cured for 28 days.

**Typical Strengths of MULTIGROUT801 GP:**
**Strength in MPa at flowable consistency and tested at 20° c .**

| Age | Compressive | Flexural | Tensile |
|---|---|---|---|
| 1 Day | 15 Mpa | 1.8 Mpa | 1.2 Mpa |
| 3 Days | 25 Mpa | 3.0 Mpa | 3.0 Mpa |
| 7 Days | 40 Mpa | 4.6 Mpa | 4.4 Mpa |
| 28 Days | 58 Mpa | 6.5 Mpa | 5.4 Mpa |

The data is based on controlled laboratory tests as per our quality assurance procedure. Variations can be expected under prevailing site conditions.

**Directions for Use**
All equipment to be grouted must be free of grease, oil and dirt and the concrete surface must be scabbled, cleaned and be well saturated for 24 hours prior to grouting. Do not mix more grout than can be used in + 30 minutes. Once the grout has stiffened, do not re-temper by adding water.

**Hot and Cold Temperature**
Temperature of both the grout and all elements coming into contact with the grout should be in the range of 10-26° C. Do not grout in freezing conditions. If outside this range special information on high and low temperature grouting recommendations are available from your local MCC LIMPOPO's Field Representative.

**Curing**
All exposed areas of grout must be treated with MULTI CURE 300 C or MULTICURE 200 curing compounds or kept saturated for at least 10 days.

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**Watchpoints**
* Site and laboratory tests should be determined on desired placing consistency rather than strictly on the water content. This must be established prior to placing the grout.
* Always place grout from one side only. Do not pour grout from both sides as this will result in entrapment of air-creating a gap (air pocket) between the underside of bedplate and grout.
* Do not use contaminated water or water in an amount or at a temperature that will produce bleeding, segregation, delayed hardening and low strengths.
* For fatigue and impact resistant grouting, use MULTIGROUT 820 MP Metallic Aggregate and Pea Gravel Non-shrink Grout.
* For normal precision grouting where the thickness of grout is less than 100 mm, refer to our MUL TI GROUT 800 N or MULTIGROUT801 GP technical datasheets.

**Yield**
One 25kg bag of MULTIGROUT 815 NP when mixed with 3.2 to 3.5 litres of water will yield± (12 litres) offlowable grout.
Note: Optimum water demands can be verified on site as environmental conditions influence grout/water requirements.

**Packaging**
Supplied in 25kg double lined moisture resistant bags.

**Specification Clause**
All grouting shall be carried out, where indicated, using MULTIGROUT 815 N.P. flowable and high ultimate strength grouts as manufactured by MCC LIMPOPO's to the following specifications:
* To comply with CRD-C 226-80 and ASTM C 109-80 specifications.
* Cure all exposed grout with MULTICURE 300 C / 200 C curing compounds.
* The grout shall be mixed and used strictly in accordance with the manufacturer's recommendations.

**Quality Assurance**
MCC LIMPOPO's production and testing programmes comply with local testing standards. These stringent testing requirements must also comply with ASTM C 109-80 and CRD-C 226, specifications for Flowable Grouts.

**Updates**
This data sheet supersedes all previous issues prior to this date: 01/11/98.