TREMCO
Construction Products Group

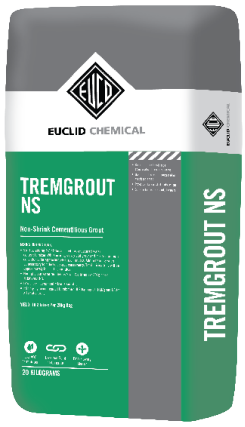
TREMGROUT NS
Non-Shrink Cementitious Grout

PRODUCT DESCRIPTION
TREMgrout NS is a cement based, non-shrink grout ideal for construction and civil grouting applications. TREMgrout NS provides high compressive strengths and can be mixed and placed from plastic to flowable consistency. TREMgrout NS can be extended with aggregate for large volume placements.

USAGE/PURPOSE
Non-shrink grouting applications including:
- ❑ Precision grouting applications with clearances of 12mm – 150mm
- ❑ Column Base plates
- ❑ Pumps, motors, drives
- ❑ Machine bases of all types
- ❑ Non-shrink grouting of structural steel and pre-cast concrete

FEATURES & BENEFITS
- ❑ Shows positive expansion when tested in accordance with ASTM C 1090 and meets non-shrink requirements of CRD-C 621, Corps of Engineers specification for non-shrink grouts
- ❑ Rapid strength gain for early support, with high ultimate compressive strengths
- ❑ No added chlorides
- ❑ Placement by pouring or pumping
- ❑ Can be extended with aggregate for large volume placements

PACKAGING
20kg Bags



COVERAGE/YIELD
Approximately 10.2lts per 20kg bag at flowable consistency.

STORAGE
Store in original, undamaged packaging in a clean, dry, protected location. Shelf life will be 12 months when stored as recommended.

TYPICAL PHYSICAL PROPERTIES AT 21°C			
PROPERTY		**STANDARD**	**FLOWABLE CONSISTENCY**
Compressive Strength	1 Day	ASTM C109 (restrained)	34 MPa
	7 Days		68 MPa
	28 Days		82 MPa
Compressive Strength	1 Day	AS 1478.2	27 MPa
	7 Days		62 MPa
	28 Days		78 MPa
Flow Rate		ASTM C1437 (Flow Table)	> 130%
Expansion	3 Days	ASTM C1090 / CRD-C 621	0.04%
	28 Days		0.08%
Flexural Strength	1 Day	AS 1012.11	4.8 MPa
	7 Days		9.5 MPa
	28 Days		11.2 MPa
Tensile Strength	1 Day	AS 1012.10	3.1 MPa
	7 Days		4.4 MPa
	28 Days		7.8 MPa
Working Time			30 minutes
Setting Time	Initial	Gillmore Needles	3 to 4 hours
	Final		5 to 6 hours
*Compressive Strength results published above are typical based on laboratory testing using 50mm cubes and tested at 13% water. Variations of these results can be expected if alternative sample sizes, or test methodology is used.			

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INSTALLATION GUIDELINES

Surface Preparation (Concrete): Concrete surfaces must be prepared using acceptable mechanical means and concrete degreasers as necessary to obtain a clean, sound and rough concrete surfaces with an exposed coarse aggregate profile. The prepared substrate must be free from oil, grease, surface laitance and any other contaminants. Prior to placement, soak concrete surfaces thoroughly for a minimum of eight hours with potable water. Remove all excess surface water immediately before grouting.

Surface Preparation (Steel): Where bond to metal surfaces is not required, coat with a bond breaker. Where bond to metal surfaces is required, the surface shall be clean, free of oil, grease, rust, loose coatings and any other contaminants. Air relief holes must be provided where base plate design and high spots will create air pockets. Any shims and wedges that are to remain in place, should be positioned a minimum of 50mm from the edge of the baseplate & have rounded corners to reduce stresses created during grouting.

Formwork: Formwork shall be rigid, securely anchored & strong enough to resist the forces created during grout placement. Formwork shall be caulked/sealed to prevent grout leakage during placement. Formwork shall be coated with a suitable form release compound. The clearance between formwork and base plate on the pouring side shall be sufficient to allow for a head box. The clearance for remaining sides shall be 25 to 50mm. The unrestrained shoulders of the grout must be kept to a minimum. Height of formwork shall extend a minimum of 25mm above the bottom of the base plate.

Mixing: Small quantities of grout may be mixed with a drill and paddle mixer. A mortar or pan mixer should be used for larger grouting jobs. Do not exceed one-half the maximum capacity of the mortar mixer. Concrete or cement mixers are not recommended except for when extending grout with coarse aggregate. Pre-wet mortar mixer & empty excess water. Start by adding 2/3 of the selected, pre-measured water content to mixer. While mixing, slowly add grout and mix to a uniform consistency for approximately three minutes. Add remaining water as necessary to achieve desired consistency. Total mixing time will be approximately four to five minutes. Do not exceed maximum water as stated on product packaging or add an amount that will cause segregation. Do not mix more material than can be placed within the working time of the grout. Do not re-temper the mix by adding additional water.

Placement: TREMgrout NS can be placed by pouring, or pumping. Placement thicknesses range from 12mm up to 150mm per lift. Grout must be placed quickly and continuously from one side only and across the shortest distance possible. A head box or similar device is recommended when pouring grout to avoid air pockets under the baseplate and assure complete filling of the void. Place grout only to the bottom edge of the baseplate. For placements where the clearance is beyond 150mm, TREMgrout NS can be extended with clean, coarse aggregate. Contact customer service on (02) 9638 2755 for aggregate extension guidelines.

Finishing and Curing: As soon as the sheen of water disappears from exposed grout shoulders and the grout has started to stiffen, pond the exposed surfaces with water or cover with wet rags, or plastic to prevent premature drying out. TREMgrout NS must be wet cured for a minimum of 3 days or coated with an approved curing compound after 24 hours of wet curing. Formwork may be removed as soon as the grout has stiffened or set sufficiently to prevent sagging away from the bottom of the baseplate.

Note: Formwork facilitates curing when left in place for as long as possible. If chamfer strips were not included in formwork, then exposed shoulders should be mechanically trimmed to provide a 45˚ chamfer on vertical & top edge sharp corners.

Mixing Water Guide: (**Note:** Do not add water in an amount that will cause bleeding, or segregation)

Consistency	Estimated Water Content per 20kg Bag
Plastic	2.1 to 2.4 litres
Flowable	2.4 to 2.8 litres

HEALTH & SAFETY PRECAUTIONS

The Safety Data Sheet (SDS) must be read and understood prior to use.

TECHNICAL SERVICE

TREMCO has a team of Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice, call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

TREMCO products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with TREMCO written instructions and (b) in any application recommended by TREMCO, but which is proved to be defective, will be replaced free of charge.

Any information provided by TREMCO in this document in relation to TREMCO's goods or their use is given in good faith and is believed by TREMCO to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. TREMCO makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.

PRECAUTIONS/LIMITATIONS

- ❑ For optimum performance grout should be conditioned to ambient temperatures of between 15°C and 24°C. Temperature of substrate and equipment should be between 4°C and 32°C.
- ❑ When grouting in extreme conditions, follow the recommendations of ACI 305R "Guide to Hot Weather Concreting", or ACI 306R "Guide to Cold Weather Concreting".
- ❑ Do not use grout at temperatures that may cause premature freezing.
- ❑ Rate of strength gain is significantly affected by temperature extremes. Published Physical Properties are typical values at ambient conditions.
- ❑ Proper curing is required.
- ❑ Grout shoulder cracking may occur on wide shoulders, improperly cured shoulders, or at stress points such as shim packs, bolts, or plate stiffeners. These cracks are typically of no structural significance.
- ❑ Store materials in a dry place.
- ❑ In all cases, consult the Safety Data Sheet before use.

CONTACT OUR TEAM

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