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NON-SHRINK, CEMENTITIOUS GROUT

GT 100 NS is a non-shrink, cementitious grout with a special dual stage shrinkage-compensating mechanism. The grout is non-metallic and contains no chloride. The grout compensates for shrinkage through a special blend of shrinkage-reducing agents, compensating for shrinkage in both plastic and hardened states. GT 100 NS meets Corps of Engineers' Specification CRD C-621 and ASTM C-1107.

This structural grout provides the advantages of multiple fluidity with a single component. The grout finds broad application in grouting of column bases, anchor rods, bearing plates and for deep pours under large compressors and reciprocating engines. Applications may be indoors, outdoors, on grade, above grade and below grade.

TYPICAL HANDLING PROPERTIES

Flow Conditions:	Plastic (1)	Flowable (1)	Fluid (2)
Typical Water Requirements (pints):	6½	7	9½
Set Time (hours) ASTM C-266: Initial	4	4.5	5.5
(Varies with temperature) Final	5	6	7

TYPICAL PHYSICAL PROPERTIES

	Plastic (1)	Flowable (1)	Fluid (2)
Compressive Strength CRD C-621(psi)			
1 day	4500	3500	2700
7 days	6100	5700	5600
28 days	7500	6200	5800
Flexural Strength ASTM C-293 (psi)			
28 days	1400	1200	1000
Bond Strength ASTM C-882 modified (psi)			
28 days	2000	1900	1900
Expansion CRD C-621 (%)			
28 days	+0.021	+0.056	+0.027
(1) ASTM C-230:	100-124% (plastic), 124-145% (flowable)		
(2) CRD C-79:	10-30 sec efflux time		

PACKAGING

GT 100 NS is shipped in 55 lb. multi-wall bags, with 40 bags to a pallet. The yield of each properly mixed bag is approximately 0.48 cu. ft./ bag at high flow.

STORAGE AND SHELF LIFE

Material should be stored in dry storage conditions. Under proper storage conditions, shelf life of the material is 1 year.

INSTALLATION PROCEDURES

The installation procedures in this bulletin will be as specific as possible. If any questions arise after reading this bulletin, please contact KCC Corrosion Control for more specific information.

• Surface Preparation

Remove all dirt, oil, grease, and all other bond-inhibiting agents or materials by mechanical means. Anchor bolts to be grouted must be degreased with a suitable solvent.

Concrete must be sound and roughened to promote mechanical adhesion. Prior to pouring, surface should be brought to a SSD, saturated surface dry condition.

• Forming

For fluid grout, construct forms to retain the grout without leakage. Forms should be prepared, coated or lined with a bond-breaker for ease in removal. Forms should be sufficiently high to accommodate a head of grout. Where grout-tight form is difficult to achieve, use GT 100 NS in dry pack consistency.

• Mixing

Mix either manually or mechanically. Manual mixing in a wheelbarrow or mortar box is acceptable. Mechanically mix with a slow speed (400-600 rpm) drill type mixer and paddle, or in an appropriate sized mortar mixer.

Make sure all forming, mixing, placing and clean-up materials are on hand. Add approximately 6½ pints of **clean** water per bag of grout to obtain plastic flow. Add additional water to a maximum of 9½ pints to achieve desired flow. The bag of powder (identified with blue label for water based grout) is then added to the mixing vessel. Mix to a uniform consistency, minimum of two (2) minutes. Ambient and material temperature should be as close as possible to 70°F. If higher temperature, use cold water, if colder, use warm water. Excess water in mix can defeat non-shrink capability.

• Placing Grout

Grout must be placed into forms in a manner to avoid entrapment of air, within 15 minutes after mixing. Vibrate, pump or ram grout as necessary to achieve flow or compaction. GT 100 NS must be confined in either the horizontal or vertical direction, leaving minimum exposed surface. After the grout has achieved its final set, remove all forms and trim or shape exposed grout shoulders to required profile. GT 100 NS is an excellent grout for pumping, even at high flow. For pump recommendations, contact KCC Corrosion Control Technical Service.

Wet cure the grout for a minimum of three (3) days or apply a curing compound which complies with ASTM C-309.

Always make sure that the substrate and ambient temperatures are a minimum of 45°F and rising at and during the time of mixing and application. The minimum application thickness is ½". ***MATERIAL MUST BE PLACED WITHIN 15 MINUTES OF MIXING. DO NOT USE THE MATERIAL AS A PATCHING MORTAR.***

• Clean-Up

Sweep all unused material, containers, bags etc., into an appropriate container. Dispose of properly, in accordance with Federal, State and Local regulations. Uncured material can be removed with the application of water. Cured material can only be removed by mechanical methods.

SAFETY

Suspect carcinogen contains Portland cement and crystalline silica. Avoid breathing dust. Use only with adequate ventilation, may cause delayed lung injury (Silicosis). IARC lists crystalline silica as having sufficient evidence of carcinogenicity in laboratory animals and limited evidence of carcinogenicity in humans. NTP also lists crystalline silica as a suspect carcinogen.

IRRITANT: Skin and eye irritation, avoid contact. The use of NIOSH/MSA dust respirator, safety goggles and rubber gloves is required. Remove contaminated clothing.

WARRANTY

For product warranty see KCC Corrosion Control Co., Ltd. *STANDARD TERMS AND CONDITIONS* (U. S. 3/2006 KCC-Sale), stated terms including limitation of liability constitute the total warranty.

The information contained herein is believed to be accurate and reliable but is not to be construed as implying any warranty or guarantee of performance. The suggestions or recommendations and data contained herein are based on laboratory tests and field data that are believed to be accurate and reliable. The suggestions or recommendations of data contained in this bulletin are made without guarantee or representations as to results. We suggest that the user evaluate these suggestions or recommendations in your facility or laboratory or in field testing prior to use. For specific Corrosion Control Co., Ltd. product Limited Warranty and Limitations of Liability see KCC Corrosion Control Co., Ltd. Terms and Conditions of Sale - U.S. Rev. 3/2006 KCC - Sale. No statement contained herein shall infer or be construed as granting the right or permission to use, in any manner whatsoever, any patent or intellectual property owned by a KCC company or any KCC affiliate company.

NOTES:

FIRST AID: Flush eyes immediately with water for 15 minutes. Contact a physician.

Material Safety Data Sheets have been supplied with your shipment. KCC Corrosion Control recommends that the personnel applying the materials first read and understand these data sheets prior to mixing or using any material.

KEEP CONTAINERS TIGHTLY CLOSED, OUT OF THE REACH OF CHILDREN.

THIS MATERIAL IS FOR INDUSTRIAL USE, BY EXPERIENCED PERSONS, AND SHOULD NOT BE USED BY OTHERS. IN EMERGENCY SITUATIONS CONTACT CHEMTREC AT 800/424-9300.