



RAPID HARDENING CEMENT PRODUCTS

VERSION REV. MARCH 2017

POST-TENSIONING GROUT

PRODUCT DESCRIPTION:

CMAX[®] PTG is an aggregate free, high flow hardening hydraulic cement grout, non-shrink, high strength, and requires only adding water to form a liquid grout material using proprietary cement technology.

PRODUCT USE:

CMAX[®] PTG is ideal for precast applications from tension tendons, slab panels, beams, and steel columns. Voids under sub-grade and precast concrete panels fill as product exhibits no bleeding and high pump-ability. Our proprietary formulation allows the product to obtain ultra-high flow characteristics with no chlorides, no corrosive reactions, no metallics and no chemical admixtures.

SIZES:

- 50 lb. (22.7 kg) bags with 56 bags per pallet

YIELD:

- CMAX SBG yields approx. 0.45 cu ft (12.7 L)

SHELF LIFE:

- 12 months in original, unopened bags.

TECHNICAL DATA

APPLICABLE STANDARDS:

- ASTM C109/C109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
- ASTM C191 Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle
- ASTM C928 Standard Specification for Packaged, Dry, Rapid Hardening Cementitious Material for Concrete Repairs

- ASTM C939 Standard Test Method for Flow of Grout for Pre-placed Aggregate Concrete (Flow Cone Method)
- ASTM C1090 Standard Test Method for Measuring Changes in Height of Cylindrical Specimens of Hydraulic Cement Grout
- ASTM C1107 Standard Specification for Packaged Dry, Hydraulic Cement Grout (Non-shrink)

PHYSICAL/CHEMICAL PROPERTIES

CMAX[®] PTG provides typical physical properties as shown in Table 1, when tested in accordance with ASTM C109 Mod. and applicable standards.

Curing Time	Compressive Strength	
ASTM C942 per 4.4.2 7 days @ 73 °F	> 3000 psi	(20.7 MPa)
ASTM C942 per 4.4.2 28 days @ 73 °F	> 5000 psi	(34.4 MPa)
ASTM C1152 Chloride Ion	< 0.08%	%Cl
ASTM C1090 Volume Change	0.05% @ 24 hours	0.1% @ 28 days
ASTM C940 Bleeding	Age 3 hours	0%
ASTM C939 Flow Cone (a) Immediately after mixing (b) 30 min. after mixing with remixing for 30 seconds. **	Efflux Time (a) 10-20 seconds	Efflux Time (b) 15- 30 seconds
ASTM C1202 @ 28 Days	Applied @ 30 V	< 2500 C.
Set Time, Min. @ 73 °F	180 Initial	280 Final
Inclined Tube Test EN 445 per 4.4.9 **	Bleeding (a) 0.0%	Bleeding (b) 0.0%



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PROVEN TECHNOLOGY FOR OVER 25 YEARS

POST-TENSIONING GROUT

SURFACE:

All grout areas should be free of loose material, clean and free of dirt, oil, grease and fines from concrete surface.

METHODS:

Maybe applied in ambient temperature range of 40°F (4°C) to

90°F (32°C). CMAX[®] PTG is mixed and pumped into the bedding grout distribution (grout hole ports at 1 1/4 (32mm) system cast into the underside of each slab. Grout is pumped into the lowest of the two connected ports and should continue to pump until grout extrudes from the uphill ports. Allow placement time as the grout is pumping to disperse beneath the slab and fill until all voids and channels have been grouted. Remove any excess from surface.

MIXING:

- CMAX[®] PTG requires only the addition of clean potable water. Per 50 lb. bag use 4.3qt (4.1 L) +/- (0.5L) based on job site conditions which may range (18 - 20%) water per bag.
- Place the potable water into the mixer and gradually add grout while mixer is running.
- CMAX[®] PTG can be mixed in a mortar mixer and/ or other high shear mixer recommended at minimum 1800 rpm. Mix for 3 - 5 minutes and or lump free with continued agitation on low speed until grout is dispersed from mixer.
- Recommend 5 bags per batch at 50 lbs. each based on 60°F-70°F temperatures and maybe adjusted per job site conditions.
- Mix close to the area being repaired and in batch volume which may be placed in 15 mins or less from addition of water in mixer.

CURING:

No curing membranes or compounds are required. However, no negative affect occurs if placed per project specifications.

PRECAUTIONS:

- Mix no more than can be placed within working time.
- Do not re-temper grout or overwater mix.
- Hot temperatures will reduce the setting time. Above 90°F (32°C) ice water may be used to extend working time. Option to extend working time use CMAX Delay liquid or powder *see your sales associate*. At colder temperatures, below 50°F (10°C), use hot water to bring mix temperature at 70°F.

WARRANTY:

CC Products Incorporated warrants this product to be of merchantable quality when used or applied in accordance with the instructions herein. The product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of its product (as purchased) found to be defective, or at the shipping companies' option, to refund the purchase price. In the event of a claim under this warranty, notice must be given to CC Products Inc. in writing. This limited warranty is issued and accepted in lieu of all other express warranties and expressly excludes liability for consequential damages.

CONTACT DETAILS:

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LEED Eligibility for Regional Materials (MR-c5) and Recycled Content (MR-c4)

Refer to www.CMAXcement.com for the most current technical data, MSDS, and guide specifications. (Site Under Construction)

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