



**NONSHRINK HYDRAULIC CEMENT GROUTS**

**GENERAL**

Acceptance of nonshrink hydraulic cement grouts will be on the basis of approved brands and satisfactory certifications. These materials are approved for use when the plans or specifications permit their use for grouting purposes. Brand names must be identifiable on the containers. Approved brands are listed in [Appendix A](#).

When a grout is to be used in contact with stressed tendons or other corrosion-sensitive, load-bearing structural members, the user shall make sure the material meets relevant chloride, nitrite, sulfide and sulfate requirements, and any other material limitations imposed by the applicable Iowa DOT specifications. As noted, some grouts listed on Appendix A have the acid-soluble chloride content lower than 0.08% by weight per ASTM C 1152 or AASHTO T 260.

**ACCEPTANCE**

Prior to being placed on the list of approved brands, one or more products per manufacturer will be evaluated by the Office of Materials. The evaluation will consist of testing the grout for strength and shrinkage. Approval of products shall consist of the following:

**A. Compressive Strength**

ASTM C 109

Plastic State	1 day	3000 psi
	7 days	5000 psi
Fluid State	1 day	1000 psi
	7 days	3500 psi

**B. Shrinkage**

Plastic State	ASTM C 827 (The manufacturer shall provide independent test result of C 827 for evaluation)	In plastic state, the grout must not shrink, and the grout must not expand by more than 4.0%.
Hardened State	ASTM C 1090	0.3% Maximum 0.0% Minimum

When casting specimens for above tests, consistency shall meet the following requirements:

Plastic State	ASTM C 1437	100 - 125
Fluid State	ASTM C 939/ <a href="#">IM 375</a>	10 - 30 seconds

If the manufacturer can provide independent test results, some of the above tests may be waived.

### **CERTIFICATION**

The manufacturer shall file a certification with the Office of Materials at the beginning of each calendar year stating that the material supplied during that year is identical with the formulation previously tested and approved by the Office of Materials.

### **MONITOR SAMPLING & TESTING**

The Office of Materials may sample and test hydraulic cement grouts to verify their capability of meeting the approval requirements