

934 NON-SHRINK GROUT.
(REV 1-15-03) (FA 1-21-03) (7-03)

SECTION 934 (Pages 869 and 870) is deleted and the following substituted:

SECTION 934
NON-SHRINK GROUT

934-1 Scope.

This Section covers only prepackaged non-shrink cementitious grout for structural use.

934-2 Type Permitted.

Only non-metallic formulations of grouts are allowed. Gas producing, metal oxidizing and expansive aggregate grouts are not allowed.

934-3 Sampling and Testing Methods.

Perform concrete sampling and testing in accordance with the following methods:

Making and Curing Concrete Test Specimens
in the Laboratory ASTM C 192 [ASTM C 192M]
Time of Setting Concrete Mixtures by
Penetration Resistance..... ASTM C 403 [ASTM C 403M]
Determining Low-Levels of Chloride in Concrete and
Raw MaterialsFM 5-516
Compressive Strength of Hydraulic Cement
Mortars ASTM C 109 [ASTM C 109M]
Flow of Grout for Preplaced Aggregate Concrete
(Flow Cone Method) ASTM C 939
Measuring Changes in Height of Cylindrical Specimens from
Hydraulic Cement Grout ASTM C 1090
Expansion and Bleeding of Freshly Mixed Grout for Preplaced
Aggregate Concrete in the Laboratory ASTM C 940

934-4 Requirements.

When tested as provided in 934-3, the grout shall meet the following requirements:

Property	Test Value
Compressive strength	
one day	2,500 psi [17 MPa] minimum
3 days	5,000 psi [35 MPa] minimum
Time of set, final	8 hours maximum
Chloride Content	0.40lb/yd3 [0.25 kg/m3] maximum
Hardened Height Change @ 1, 3, 14, and 28 Days	0.0% to 0.3%
Hardened Height Change @ 1, 3, and 14 Days	≤ Height Change @ 28 Days
Expansion	≤ 2.0% @ 3 Hours
Bleeding, Final	0.0% @ 3 Hours

934-5 Product Acceptance on the Project:

Non-shrink grout used shall be one of the products listed on the Qualified Products List. Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6.

Acceptance will be made in accordance with the products listed on the Qualified Products List (QPL).

934-6 Rejection.

Materials shall be rejected at the point of use if the materials are caked, lumpy, or show any signs of deterioration. Materials shall be rejected if the grout does not achieve the design fluidity or consistency when mixed according to the manufacturer's recommendations.

All broken or open packages shall be rejected.

934-7 Packaging.

Cementitious materials for grouts must be packaged in suitable moisture resistant containers and clearly labeled. Where applicable, manufacturers recommendations, limitations and cautions shall be clearly visible on each label.