

SECTION 934 NON-SHRINK GROUT

934-1 Scope.

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

934-2 Applicable Documents.

FM 1-T 126: Method of making specimens.

FM 1-T 106: Method of testing compressive strengths.

FM 1-T 197: Method for testing time of set.

FM 5-516: Method for determining low-levels of chloride in concrete and raw materials.

ASTM C 939: Method for flow of Grout for preplaced aggregate concrete (flow cone method).

ASTM C 1090: Method for measuring changes in height of cylindrical specimens from hydraulic cement grout.

934-3 Type Permitted.

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

934-4 Requirements.

When tested as provided in 934-2, at the fluidity or consistency designated for the specified application, the grout shall meet the following requirements:

Expansion, at 3, 14, 28 days	Not greater than 0.4%
Expansion, at 3 or 14 days	Not greater than expansion at 28 days.
Shrinkage, at 28 days	None
Compressive strength,	
seven days	2,500 psi [17 MPa] minimum
28 days	5,000 psi [35 MPa] minimum
Time of set, final	8 hours maximum
Chloride Content	0.40lb/yd ³ [0.25 kg/m ³] maximum

934-5 Acceptance.

Except as provided for herein, non-shrink grout shall be one of the products included on the Qualified Products List. Materials that are included on the Qualified Products List, as provided in 934-8, require no additional testing. For materials proposed for use that are not on the Qualified Products List, submit a unit sample to the Engineer for testing at the State Materials Laboratory. Unit samples submitted for testing shall be a single package of no less than 1 ft³ [0.03 m³]. Materials remaining in storage for more than six months must be retested before use.

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.

934-8 Qualified Products List.

Manufacturers seeking evaluation of non-shrink grout shall meet the requirements of 6-1 and this Specification. Materials which fail to meet the requirements of 934-4, when tested for manufacturer's evaluation or jobsite approval, will not be included on the Qualified Products List.