

**INSPECTION & ACCEPTANCE
RAPID-SETTING CONCRETE PATCHING MATERIALS FOR PAVEMENTS**

GENERAL

Acceptance of rapid-setting concrete patching materials will be on the basis of approved brands and satisfactory test results. These materials are approved for use when the plans and/or specifications permit their use for surface patching purposes.

Brand names must be identifiable on the packages. Material shall be packaged in a multi-wall moisture resistance paper bag. Shelf life shall be indicated on each packaged bag (by expiration date). Mixing sequence and addition of mixing water for each material shall be as directed and recommended by each manufacturer. When coarse aggregate is used, its type and quantity shall follow manufacturer recommendations and a minimum of Class 2 durability rating. Approved brands are listed in Appendixes A and B.

APPROVAL

Rapid-setting concrete patching materials will be evaluated by the Central Materials Laboratory, prior to being placed on the list of approved brands. The evaluation will consist of testing the material for strength, bonding, durability and shrinkage. Manufacturer shall provide the slant shear strength (ASTM C 882) tested by independent laboratory for the evaluation. Approximately 45 kg (100 lbs) of materials is required to perform testing.

Appendix A consists of rapid set patching materials for pavement patching. Appendix B consists of shrinkage compensated rapid set patching materials for dowel bar retrofit projects. The minimum requirements are as listed in the following table.

	ASTM Test Method	Cure Time	Appendix A	Appendix B
Compressive Strength, MPa (psi) minimum	C 39 or C 109	3.0 Hours 24 Hours	7.0 (1000) 20.7 (3000)	20.7 (3000) 34.5 (5000)
Bonding, Slant Shear MPa (psi) minimum	C 882	1 day Lab cure	7 (1000)	7 (1000)
Durability, Method A	C 666	1 day air + 6-day soak in water	70% min. (100 cycles)	90% min. (100 cycles)
Shrinkage, length at 3 hrs	C 157	28 days in water 28 days in air	+0.15% -0.15%	+0.15% -0.05%
Magnesium content				0.0%
Chloride Content				0.0%

A product may be approved based on the satisfactory independent test results. A product satisfactorily evaluated by the National Transportation Product Evaluation Program (NTPEP) will be accepted on the approved list.

If manufacturer can provide independent test results to show its product meeting ASTM C 928 performance requirements for Type R2 or R3 patching materials (ASTM C 928, Table 1) or Appendix B requirements, some of the above tests may be waived.

Products meeting the requirements of Appendix B will also be placed on Appendix A.

CERTIFICATION

The manufacturer shall file a certification 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 rapid-setting concrete patching materials to verify their capabilities of meeting the approval requirements.