

**New Hampshire Department of Transportation  
Bureau of Materials & Research**

**Qualified Products List (QPL) – Qualification Criteria**

**Section 520 - Portland Cement Concrete, NHDOT Specifications**

**QPL Category: 520.A. Item 520.8 – Rapid-Hardening Patching Material**

**Product Requirements**

Product Description

Rapid-hardening patching materials for horizontal, vertical, and overhead repair shall be those specified for use to repair damaged concrete elements, and shall be cementitious, polymer-modified, or polymer concrete. They shall also be non-metallic, non-chloride, and non-gypsum.

Laboratory Test Performance

<b>Rapid-Hardening Patching Material</b>		
<b>Cementitious</b>		
<b>Property</b>	<b>Test Method</b>	<b>Requirement</b>
Compressive Strength, 3-hour	ASTM C109	500 psi min.
Compressive Strength, 1-day	ASTM C109	2000 psi min.
Compressive Strength, 7-day	ASTM C109	4000 psi min.
Bond Strength, 1-day	ASTM C 882	1000 psi min.
Length Change	ASTM C 157	±0.100%
Freeze-Thaw Mass Loss	AASHTO T 161 Procedure A	1.0% max.
Durability Factor	AASHTO T 161 Procedure A	95% min.
<b>Polymer-Modified</b>		
<b>Property</b>	<b>Test Method</b>	<b>Requirement</b>
Compressive Strength, 3-hour	ASTM C109	500 psi min.
Compressive Strength, 1-day	ASTM C109	2000 psi min.
Compressive Strength, 7-day	ASTM C109	4000 psi min.
Bond Strength, 1-day	ASTM C 882	1000 psi min.
Length Change	ASTM C 157	±0.100%
Freeze-Thaw Mass Loss/Gain	AASHTO T 161 Procedure A	1.0% max.
Durability Factor	AASHTO T 161 Procedure A	95% min.
<b>Polymer Concrete</b>		
<b>Property</b>	<b>Test Method</b>	<b>Requirement</b>
Compressive Strength, 3-hour	ASTM C 579	500 psi min.
Compressive Strength, 1-day	ASTM C 579	2000 psi min.
Compressive Strength, 7-day	ASTM C 579	4000 psi min.
Bond Strength, 1-day	ASTM C 882	1000 psi min.
Length Change	ASTM C 531	±0.100%

## Required Submissions

*Only complete product submittal packets will be considered for review.*

The following documents shall be sent to the Department's Product Evaluation Unit (PEU) for its review in consideration of qualifying the product for inclusion in the QPL:

### QPL Product Submittal Form

The submitted form must be the current, on-line version of the form, and must be completely filled out. It can be accessed here: <https://www.nh.gov/dot/org/projectdevelopment/materials/research/products.htm>.

### Letter of Compliance

A Notarized letter on the manufacturer's letterhead affirming the product meets all Department requirements described herein.

### Product Literature

Current product literature, including technical data sheets and Safety Data Sheets (SDS), relevant to the material's use, limitations, material properties, storage, mixing, application/installation, and all precautions for the product, as applicable.

### Laboratory Test Results

Product submittals without laboratory test documentation will not be reviewed.

## Laboratory Testing

As part of the evaluation, the Department will obtain and review the required test results from the AASHTO National Transportation Product Evaluation Program (NTPEP). Visit [www.ntpep.org](http://www.ntpep.org) for information about submitting products to this program.

## Field Test

Products in this category are required to be field tested through a NTPEP program. Once the program is completed, those test results will be reviewed for acceptability in conjunction with any required laboratory tests.

## Product Performance Monitoring / Removal from QPL

Product field performance and the product's technical data will be monitored by the Department. If either fails to meet the criteria noted herein, the product will be immediately removed from the QPL without notice to the manufacturer.

## Changes to Product Name, Manufacturer, or Formulation, of a Currently-Listed QPL Product

The PEU shall be contacted immediately when a change to any of the following is made to a product currently listed in the QPL:

- Product name
- Product manufacturer
- Product formulation

For a change in the product name and/or manufacturer, the product will remain in the QPL reflecting that change only upon receipt of verification from the current or new manufacturer attesting the product formulation is unchanged. Verification shall consist of a letter signed by the manufacturer's representative.

For a change in product formulation, the PEU will determine whether:

1. The formulation change could adversely affect the product's required performance, whereupon it will be subject to removal from the QPL; or,
2. The formulation change will not adversely affect the required performance of the product for its intended use; whereupon, the product will remain in the QPL.

If at any time it is determined that a product name, manufacturer, or formulation has changed without the required notification to the PEU, the product is subject to immediate removal from the QPL at the discretion of the PEU. The product will not be re-listed in the QPL until the manufacturer provides complete, updated information.

**QPL Expiration Date / Product Test Frequency**

Qualified products in this QPL section will be listed for 5 years from the date of the most current laboratory test results documentation. Based on this date, a corresponding expiration date will be assigned and will be shown in the QPL. For the product to be listed in the QPL past its assigned expiration date, the supplier/manufacturer shall submit new NTPEP laboratory test results documentation that verifies conformance with the current qualification criteria. The test results documentation shall be submitted with sufficient lead time prior to the expiration date to allow for the PEU's review. Products without current acceptable test results documentation will be removed from the QPL upon reaching the expiration date.

**Product Marking and Labeling**

The product label shall be marked with the information as required by the applicable specification(s). If a product was converted and/or relabeled from its original manufacturer, the product name on all labels and all accompanying literature shall be that of the convertor or private label company.

**Limitations**

The Department continues to evaluate its qualification criteria as well as products that have been qualified against them, and reserves the right to revise the criteria and/or withdraw product qualification at any time for any reason without notice. Qualification of a product does not constitute an endorsement of the product, nor does it imply intent to purchase or specify the product.

**Qualification Criteria Approved by:**

Chief of Materials Technology, Materials & Research

Bureau Administrator, Materials & Research