

MaineDOT Qualified Products Acceptance Criteria

Concrete Bonding Agents

Overview

These Epoxy Resin products shall meet the following criteria for use in load-bearing applications for bonding freshly mixed concrete to hardened concrete. Products shall be classified as 100% solids and be a standard two-part (A+B) type epoxy. Mixing ratios shall be clearly stated in product submission as well as estimated working or open times. There are three grades of systems defined according to their flow characteristics. The Manufacturer shall clearly specify at the time of product submission which grade their product meets.

Open times (contact times) are temperature and humidity dependent and may vary greatly from the times shown on this list. Times shown here are primarily for comparison purposes. Please contact the manufacturer directly for a more precise estimate based on field conditions.

Criteria

Physical Requirements

Viscosity

Grade 1: Low Viscosity	100 – 2,000 cps
Grade 2: Medium Viscosity	2,000 – 10,000 cps

Consistency

Grade 3: Nonsag, sag-resistance:	¼inch max.
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Gel Time	30 minutes min.
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Bond Strength, 14 days (moist cure)	1500 psi, min.
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Water Absorption, 24 hours	1 percent, max.
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Heat Deflection Temperature, 7 days	120°F, min.
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Linear coefficient of shrinkage on cure	0.005 max.
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Compressive Yield Strength	8000 psi, min.
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Compressive Modulus	150,000 psi, min.
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Tensile strength, 7 days	6000 psi, min.
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Elongation at break	1 percent, min.
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Epoxy systems are further characterized by “Class” indicating temperature range (see table below) of the surface of the hardened concrete to which the bonding system is to be applied. This temperature may be considerably different from that of the air. Where unusual curing rates are desired, it is possible to use a class of bonding agent at a temperature other than that for which it is normally intended. For example, a Class A system will cure rapidly at room temperature.

Class A For use below 40°F.

MaineDOT Qualified Products Acceptance Criteria

Concrete Bonding Agents

Class B For use between 40°F and 60°F.

Class C For use above 60°F.

MaineDOT Standard Specifications: Current Version, Section(s) 518 – Structural Concrete Repair and AASHTO M235 (ASTM C881) Type V

PRODUCT CONFORMITY: At the discretion of MaineDOT, any shipment of product to a MaineDOT location may be tested, such as by infrared or gas chromatography, for compliance with the SDS and uniformity with the formulation of the approved product (where applicable).

NOTE: MaineDOT may require a field evaluation before final acceptance and inclusion on the Qualified Products List (QPL).

A vendor who wishes to have products preapproved for future use should contact MaineDOT's Product Evaluation Coordinator via email at NewProducts.MaineDOT@maine.gov or by calling (207) 557-1788. More information can also be found on our website, including our electronic submittal and recertification forms.

Submittals

Product Submittal Packets shall include the following information:

- [Electronic New Product Submittal](#) form
- Current Technical Data Sheet
- Current Safety Data Sheet (SDS)
- Third Party, Independent Test Results OR AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing ID for those products requiring this testing

Incomplete submittals will not be evaluated for inclusion on MaineDOT's Product Lists.

All reports shall be issued and signed by an authorized laboratory representative. The report shall include date of testing, product name, and the physical and/or chemical requirements stated herein.

Product Changes

Any change in a product, such as formulation, shall require re-testing (through AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) if required) or independent, third-party lab. Manufacturers shall notify MaineDOT of products changes and resubmit as a new product for re-evaluation, failure to do so may result in removal of product from MaineDOT's QPL.

Manufacturers shall submit, for re-evaluation, an updated independent analytical laboratory

MaineDOT Qualified Products Acceptance Criteria

Concrete Bonding Agents

report (or AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing ID) prior to approval or purchase by MaineDOT.

Recertifications

MaineDOT requires re-certification by all manufacturers every five years (except for electrodes used for field welding which are recertified every year) to ensure that product names and formulations have remained the same since the product was originally placed on this list and that products are still relevant and in production. Where applicable, this shall include the most recent AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing ID. Additionally, AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) provides for retesting products. A lapse of AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing/audit schedule as set forth in the associated workplan shall result in disqualification of the product.

Manufacturers of any products requiring MASH testing must contact MaineDOT Product Evaluation Program of any changes to their products. Manufacturers are responsible for tracking their recertification dates, reminders will not be sent. Failure to recertify products may result in removal from the QPL. Recertifications can be completed using the [Electronic Certificate of Compliance](#) found on our website.

Other Information

The Department continues to evaluate its Acceptance Criteria and reserves the right to revise the criteria and/or withdraw product qualification at any time for any reason without notice.

Furthermore, the ability of a product to meet these requirements does not necessarily guarantee addition to the Qualified Products List. Reminder that, products once placed on the Qualified Products List are to be considered prequalified for use only, meaning that they have undergone preliminary review for compliance with MaineDOT, and AASHTO specifications. As with all products, final approval rests with the Designer, Project Manager, Supplier and/or Resident to determine if a product best suits the need of a particular project.

If you are experiencing difficulties reading or printing this page, or have questions regarding the Qualified Products List website, please contact the Product Evaluation Program Coordinator at (207) 557-1788 or by email at: NewProducts.MaineDOT@maine.gov