MnDOT Prestressed Beam – Top Flange Bond Breaker

Send a personalized submittal package to:

Paul Rowekamp
MnDOT Bridge Office
Bridge Standards Engineer
3485 Hadley Ave N.
Oakdale, MN 55128
Telephone: 651-366-4484
paul.rowekamp@state.mn.us

Include in the submittal package:

• Completed New Products Application Form (attached),
• Manufacturer contact name, address, phone number and email address,
• Product Data Sheets including mixing, application, and curing directions,
• Material Safety Data Sheets,
• Quart of each component for Infrared Spectrum and Verification Testing,
• Certification that products meet Minnesota Statute 115A.9651 requirements for heavy metals and VOC requirements,
• Report verifying that the material meets the performance requirements listed below, and
• Completed MnDOT Office of Environmental Services Hazardous Evaluation Process Documentation (attached)

Test Procedure – Performance Requirements

Construct a test slab to mimic the top flange of a prestressed beam. The thickness of the slab shall be 5", minimum length is 4'-0", and the width shall be 2'-10", minimum compressive strength shall be 5000 psi. Rough float and broom transversely for bond the top surface of the middle 1'-10" along the longitudinal axis of the slab per spec. 2405.3.D. Steel trowel to smooth finish the top surface of the outer 6" of each side of the slab, along the longitudinal axis.
Apply the proposed bond breaker to one of the smooth troweled surfaces, following all manufacturer instructions. Apply a bond breaker product from the approved products list to the remaining smooth troweled surface for comparison purposes. Allow both products to cure as recommended by the manufacturer.
Form and place an unreinforced 9" thick, 4000 psi compressive strength concrete slab to the entire top surface of the test panel. After 28 days, carefully jack hammer the surface of the slab to remove the 9" upper slab portion. Contact the Bridge Standards Unit prior to removal to allow MnDOT personnel to witness the removal.

Prepare and submit a report describing the results of the removal operations, comparing the performance of the proposed product with the product from the approved products list. The report should include photos or video of the removal process. The slab removal for the portion of the slab above the proposed product must be no more difficult or result in a surface no less clean or smooth than the surface of the side using the product from the approved products list.

New Product ID # _____ Revised 3/22/2012
(For Mn/DOT Use Only)

State of Minnesota
Department of Transportation
New Product Preliminary Information Form

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INSTRUCTIONS: Answer ALL questions. Where a question is not applicable enter "N/A". Attach additional sheet(s) as required with reference to item number.

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Date: _____

1. Trade Name _____

   Manufacturer _____
   Phone No. (_____)_____

   Address _____ City _____ State _____ Zip _____

   Patent pending Yes ____ No ____ Patent No. _____

2. Local Distributor _____ Phone No. (_____)_____

   Address _____ City _____ State _____ Zip _____

3. Recommended Primary Use:_____
   _____

4. Describe product, material equipment or process:
   _____

5. Describe any limitations or use restrictions:
   _____
   _____

6. Material composition (attach laboratory test results, storage requirement, shelf life, Material Safety Data Sheet and disposal procedure):
   _____
   _____

7. Outstanding feature or advantage claimed:
   _____
   _____
   _____

8. Date introduced on market _____. Alternate for what existing product?
   _____

9. a. Total Estimated Cost Per Unit Material (including delivery) _____
   b. Total Estimated Cost Per Unit Furnished and Installed _____

10. Does product meet requirements of any of the following specifications?
    (Give specific number.)
    AASHTO _____ ASTM _____ Fed. Spec. _____ Mn/DOT _____

    Others (state and attach specifications) _____

11. Indicate whether this product has been evaluated by a national or regional product evaluation program? (Attach any results.)

    _____ HITEC _____ NTPEP _____ Others (specify)

12. Cite use by other agencies and persons to be contacted concerning experience with use, including how many years used, and whether use has been experimental or routine (list names, titles, mailing address and phones):

    _____
    _____

13. Note here and attach any test results, reports, etc., from the organizations above:

    _____
    _____

14. Is a documented quality control process available for this product?

    _____
    _____

15. Who has been contacted within Mn/DOT about this product? _____

    _____

    Has this person been sent a copy of this form? _____

16. Additional comments: _____

    _____
    _____

Name and Title of person completing this form:

_____

Address, State, Zip:

_____

Date: _____ Phone: (_____) _____

Email Address: _____

_____ Manufacturer _____ Representative

Mn/DOT Office of Environmental Services
Hazardous Evaluation Process

The Mn/DOT Office of Environmental Services developed the Hazard Evaluation Process (HEP) as a tool to determine potential environmental impacts that could result from use of a product and consequently, if the product is acceptable for use on Mn/DOT infrastructure. The following information must be submitted by the vendor in order for Mn/DOT to complete the HEP:

1. Vendor information
   a. Name of Company
   b. Address
   c. Technical Contact Name and Telephone Number
   d. Application Date
   e. Product Trade Name
   f. Product Chemical Name
   g. Product Data Sheet

2. Provide Material Safety Data Sheets for all chemicals in the product/waste material.

3. Regulatory Approvals & Status:
   a. Licenses
   b. Approval
   c. Permits
   d. TSCA Listing

4. Chemical Status:
   a. Provide Individual Chemical & Physical Properties (OECD[1] Methods 102, 103, 104, 105, 111, 112, 113, 117, 121);
   b. Identify chemicals with molecular weights greater than 1000 Daltons (OECD Methods 118, 120 or equivalent;
   c. Certification that final product would not be considered a hazardous waste under Minnesota Rules Chapter 7045 if disposed of unused;
   d. Names and Chemical Abstract Numbers (CAS numbers) of the reportable substances in the product (40 CFR 302);

The following product-specific information must be submitted if known. If information for a representative test is unknown it must be stated as such.

EPA SW-846 test method information can be found at:
http://www.epa.gov/epaoswer/hazwaste/test/main.htm
OECD product test method information can be found at:
http://www.oecd-ilibrary.org/
U.S. EPA Office of Prevention, Pesticides and Toxic Substances Harmonized Test Guidelines can be found at: http://www.epa.gov/ocspp/pubs/frs/home/guidelin.htm

   a. Leach test results (EPA Method 1311 and OECD Method 312 with subsequent analysis for test substance or equivalent method);
   b. Biodegradation (OECD Method 301C, 301D, 302C, 304A, 307, 309 or equivalent method);
   c. Ecotoxicity to include three trophic levels (OECD Method 201, 207, 208, 210, 211 or equivalent method, OPPTS Method 850.5400, 850.1300, 850.6200, 850.4100, 850.4150, 850.1400 or equivalent method);
   d. Other available test data that provide individual chemical fate, exposure and pathway information.

[1] Organization for Economic Co-operation and Development methodology for product testing is preferred but equivalent methods may be acceptable.

Questions regarding the Mn/DOT Hazard Evaluation Process can be sent to:

Robert.Edstrom@state.mn.us