

MnDOT Bridge Penetrating Sealer Qualification Procedure

Send a personalized submittal package to:

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MnDOT Office of Materials
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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 and curing directions,
- Material Safety Data Sheets,
- Performance History References in a cold, heavy salt spray environment,
- 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,
- Independent lab testing verifying requirements in Table 1, and
- Completed MnDOT Office of Environmental Services Hazardous Evaluation Process Documentation (attached)

Table 1: Qualification Requirements for Penetrating Sealer	
General Requirements	
Active Ingredient	a) Solvent-based alkylalkoxysilane with 40% solids minimum for the 40% Silane b) Solvent-based alkylalkoxysilane with 100% solids minimum for the 100% Silane
Resistance to Chloride Ion Penetration AASHTO T259 and T260	Less than 0.55 Chloride Content Ratio of Sealed /Unsealed at 1/2 inch level (Adjusted for baseline chloride)
Penetration Depth OHD L-40	0.15 inch
NCHRP 244 Series II	
Water Absorption	80 % reduction minimum
Absorbed chloride	85 % reduction minimum
NCHRP 244 Series IV - Southern Exposure	
Absorbed chloride	95 % reduction minimum
Alberta DOT Tests	
Waterproofing after Abrasion, % Alberta DOT Type 1b Penetrating Sealer Test	86.0 % minimum
Moisture Vapor Transmission Alberta DOT Type 1b Penetrating Sealer Test	70 % minimum

State of Minnesota
Department of Transportation
New Product Preliminary Information Form

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

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 (OECD¹ 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