



## MnDOT Crack Monitoring Device Product Qualification Procedure

### 1. Crack Monitoring Device Product Description

Products listed will be suitable for permanent mount on concrete in an exposed outdoor environment in all extremes of Minnesota. The product is a permanently affixed crack monitoring device, also referred to as a crack Tell Tail, used to monitor crack width variation at a single location over time. The crack monitoring device shall consist of two overlapped plates. The plate with scales marked in millimeter units of measurement is fixed on one side of the crack and the other plate marked with cursor is fixed on opposite side of the crack. The instrument shall be affixed to the concrete in such a way that the cursor of one plate and the middle of the scale of opposite plate will be aligned. As the crack experiences movement (including shear or normal movement), the device shall enable measurement to the nearest millimeter by recording the position of the cursor with respect to the scale. The product shall be capable of being read at any time and it shall not require an initial zero reading.

### 2. Qualification Procedure

#### a. System Qualification Requirements

- Minimum movement capability: +/- 13mm (1/2-inch) horizontally and +/- 6mm (1/4-inch) vertically
- Capability of reading to the nearest millimeter
- Millimeter markings and fonts are legible and remain legible when exposed to UV and outdoor Minnesota environment for at least 3 years
- Ability to function in a temperature range of 120°F to -30°F
- Resistant to deicing agents, fuel, and other road related chemicals
- UV stable
- Galvanized or stainless-steel connection hardware suitable for anchoring to concrete, adhesive information if applicable

#### b. Send a personalized submittal package to:

MnDOT Bridge Office  
Attn: Mark Spafford  
3485 Hadley Avenue North  
Oakdale, MN 55128-3307  
Telephone: (651) 366-4564  
[mark.spafford@state.mn.us](mailto:mark.spafford@state.mn.us)

#### c. Submittal package will include:

- Completed New Products Application Form (attached)
- Manufacturer contact name, address, phone number and email address
- Product Data Sheets (include physical properties for all components)

- Safety Data Sheets (SDS), including the SDS for any adhesives used to apply the product
- One product sample with instructions and mounting hardware for each model
- Certification that products meet Minnesota Statute 115A.9651 requirements for heavy metals and VOC requirements
- Completed MnDOT Office of Environmental Stewardship Hazard Evaluation Process Documentation (attached)

### **3. Evaluation Timeline and Listing Requirements**

Allow 30-calendar days from time of product sample receipt for evaluation. The applicant will be notified via email of acceptance. The acceptance will enable listing of the product on the MnDOT Approved\Qualified Products list until either:

- The product is found to be not performing in the function required
- The product has been altered in manufacturer and requires re-submittal as a new product.
- The submittal company name has changed
- The product name has changed

### **4. Re-application**

Products that do not pass approval may be resubmitted 12 months after receiving a product submission response.

(Information provided by manufacturer below is kept for MnDOT Internal 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: \_\_\_\_\_

Check one: \_\_\_\_\_ Manufacturer \_\_\_\_\_ Representative

10/20/2020

## Technical Overview: Hazard Evaluation Process (HEP) Policy OP010

The MnDOT Office of Environmental Stewardship 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 MnDOT infrastructure. The following information must be submitted by the vendor in order for MnDOT to complete the HEP:

1. Vendor information
  - a. Name of company
  - b. Address
  - c. Technical contact name and telephone number
  - d. Product trade name
  - e. Product chemical name
  - f. Product data sheet
2. Provide Safety Data Sheets (SDS) for all chemicals in the product/waste material.
3. Regulatory approvals and status:
  - a. Licenses
  - b. Approvals
  - c. Permits
  - d. TSCA Listing
4. Chemical Status:
  - a. Provide individual chemical & physical properties (EPA Methods 830.7200, 830.7220, 830.7840, 830.6317, 830.7370, 830.7570, 830.7950, 835.1230, and 835.2130 or equivalent methods);
  - b. Identify chemicals with molecular weights greater than 1000 Daltons (OECD Methods 118, 120 or equivalent);
  - c. Proof 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 (40CFR 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. Testing for this information must follow standardized testing procedures, such as U.S. EPA [SW- 846 test methods](#), [OECD product test methods](#), or U.S. EPA Office of Chemical Safety and Pollution Prevention [Harmonized Test Guidelines](#).

- Leach test results (EPA Method 1312 with subsequent analysis for test substance or equivalent method);

- Biodegradation (EPA Method 835.3110, 835.3190, 835.3215, 835.3300, 835.4100 or equivalent method);
- Ecotoxicity to include three trophic levels (EPA Method 850.1300, 850.1400, 850.4100, 850.4150, 850.5400, and 850.6200 or equivalent method);
- Other available test data that provide individual chemical fate, exposure and pathway information.