

## **Product Evaluation**

### **RE: Review of 3M Connected Roads All Weather Elements**

#### **PRODUCT**

3M Connected Roads All Weather Elements are retro-reflective beads manufactured and distributed in Alberta by 3M Canada Company located in London, Ontario. Website: <https://www.3mcanada.ca>

#### **VENDOR CLAIMS AND INFORMATION**

##### **CLAIMS**

3M Connected Roads All Weather Elements ("Elements") are a high performance optical component of a complete roadway marking system consisting of a liquid pavement marking, 3M composite optical Elements, and glass beads. When used with compatible binders, Elements form markings that are highly visible, day and night, under both dry and wet weather conditions. They can be used in either new marking applications or as parts of maintenance marking applications.

##### **DESCRIPTION**

3M Connected Roads All Weather Elements consist of an outer layer of microcrystalline ceramic beads partially embedded into composite cores to provide optimal performance under both dry and wet conditions when applied according to 3M recommendations. Elements must be installed using a double-drop Element/bead delivery system. Elements Series Dry, 50, 90, and Wet are generally compatible with paints formulated with DowFASTRACK™ HD21-A binder. Markings should be applied at a target wet thickness of at least 25 mils. Elements Series Dry, 50, 90, and Wet are generally compatible with formulations based on alkyd and hydrocarbon binders with a target thickness greater than 90 mils. Elements Series Dry E, 50E, 70E, and Wet E are generally compatible with formulations of epoxy and polyuria pavement markings. Elements Series Dry M, 50M, 70M, and Wet M are generally compatible with MMA pavement markings.

##### **POTENTIAL USAGE**

3M Connected Roads All Weather Elements are designed for use on long line pavement markings.

##### **STANDARDS**

#### **ALBERTA TRANSPORTATION COMMENTS**

##### **EXPERIENCE**

Alberta Transportation has no experience with this product

##### **APPLICABLE STANDARDS**

At present Alberta Transportation does have a standard for glass Beads (see link):  
<http://www.transportation.alberta.ca/Content/docType254/Production/GB05.pdf>

Alberta Transportation Standard Specifications

Specification 5.20 Supply of Line Painting Materials

Specification 53.20 Painted Roadway Lines

Specification 53.21 Painted Pavement Markings

Specification 53.22 Permanent Pavement Markings

Specifications for Bridge Construction, Section 19 Painted Roadway Markings

##### **RECOMMENDATIONS**

3M Connected Roads All Weather Elements be listed as a Potential Product under Alberta Transportation Products List, Pavement Markings – Glass Beads – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

##### **RESTRICTIONS ON USE**

Caveat: Appropriate series of 3M Connected Roads All Weather Elements should be selected for different binders.

## TRIAL PROJECTS

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