

Product Evaluation

RE: Review of 3M Liquid Pavement Marking Series 5000 (3M LPM 5000)

PRODUCT

3M LPM 5000 is a pavement marking binder that is manufactured and distributed in Alberta by 3M Canada located in London, Ontario. Website: https://www.3m.com/3M/en_US/p/d/b00010893/

VENDOR CLAIMS AND INFORMATION

CLAIMS

3M LPM 5000 can be applied above -1 °C. It becomes Track-free in less than two minutes over entire application temperature range. It provides excellent adhesion to asphalt cement concrete (ACC) and properly prepared Portland cement concrete (PCC). It has a good color retention property and it also resists discoloration caused by UV exposure and dirt pickup. It has very low shrinkage property, which enables quality installations on most common pavement surfaces. Typical VOC content is 2.1 grams/liter or less.

DESCRIPTION

3M LPM 5000 has been designed for use as a durable pavement marking on roadways and highways. It is a 2:1 ratio two-component, 100 percent solid polyurea coating material that cures rapidly to hardness after application. It can be configured to provide desired levels of retroreflective performance using a number of different optics packages. For long line markings, it is applied using a specialized mobile, truck-mounted or self-contained, pavement-marking machine. This pavement-marking machine applies the two-component liquid materials and reflective media simultaneously in continuous or skip patterns.

POTENTIAL USAGE

Applied to properly prepared road surfaces, 3M LPM 5000 markings can be used for long-lines, channelizing lines, gore markings, and intersection markings. It can also be applied over any type of well-adhered pavement marking. The thickness for 3M LPM 5000 is determined by the application surface or marking use.

STANDARDS

ASTM E1710: Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer

ASTM E2832: Standard Test Method for Measuring the Coefficient of Retroreflected Luminance of Pavement Markings in a Standard Condition of Continuous Wetting (RL-2)

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE

Alberta Transportation has no experience with this product

APPLICATION STANDARDS

Specification for Highway Construction,5.20: Supply of Line Painting and Message Marking Materials
Specification for Highway Maintenance,53.22: Durable Pavement Markings

RECOMMENDATIONS

3M Liquid Pavement Marking Series 5000 be listed as a Potential Product under Alberta Transportation Products List, Pavement Markings – Durable Plastic Marking – Non profiled – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

RESTRICTIONS ON USE

Caveat:

TRIAL PROJECTS

Rishi Adhikari

cc Innovations Evaluation Committee – Roger Skirrow,
Wayne Mah, Kimberley Edmonds, Tom Hart