COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 3676-13

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code: 713.13.01.00

FOR INTERNAL CDOT USE

Material code description full name: Traffic Control, Preformed Plastic Matl

PART 1

Product name: 271 ES Yellow, 3M™ Stamark™ Pavement Marking Tape	Product category: TC\PMM\Preformed Plastic Tape, Type III, Permanent
Product representative (name & address): Attn: Ted Denisuk 3M Company-Traffic Safety and Security Division 1370 Quentin Street Aurora, CO 80011 Phone: (303) 520-6754 FAX: (303) 344-2161	Manufacturer (name & address): Attn: 3M Company-Traffic Safety and Security Division 3M Center, Building 235-3A-09 St. Paul, MN 55144-1000 Phone: (800) 553-1380 FAX: (800) 591-9293
Web-site address: www.3M.com/roadwaysafety	Web-site address: www.3M.com/roadwaysafety

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

3M™ Stamark™ Pavement Marking Tape Series 271 ES (yellow) is a durable and conformable pavement marking tape.

271 ES has retroreflective layer of glass beads bonded in a highly durable polyurethane topcoat. 3M's premium patterned design presents a near vertical surface to traffic which maximizes the retroreflectance of the tape. 271 ES also has an embedded net which provides an increased tear resistance along with an improved pressure sensitive adhesive (PSA) package on bottom surface that allows for "Extended Season" applications down to 40°F.

Entrance Angle is 88.76°, Observation Angle is 1.05°, Retroreflected Luminance is 250.

Restrictions, (installation and/or use):

Series 271 ES tape cannot be applied below 40°F.

Use of the product, (be specific to CDOT highway activities only):

Designed for long lines, edge lines, channelizing lines, gore markings, stop bars, crosswalks and symbols /legends.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

3M™ Stamark™ Pavement Marking Tape Series 271 ES is a highly effective traffic control device. The 271 ES premium patterned design allows for wet recovery in rain conditions and the "Extended Season" adhesive allows for year round application down to 40° F within application guidelines.

Specifications, (listing those applicable is required) **& Certificate of Compliance** (required to certify compliance with listed specifications):

- [x] CDOT : Standard Specification Section 627 & 713.13 Type III
- [x] ASTM : D 4505-12
- [ ] AASHTO :
- [ ] FHWA :
- [x] other : Certificate of Conformance to ASTM D 4505 and CDOT specification

Product testing, (from national/independent laboratories or universities) **& Certified Test Report** (CTR required to validate all claims):

- [x] NTPEP-AASHTO : PMM-2010-01-022, 3M Stamark 271 ES
- [ ] FHWA :
- [ ] other :
- [x] other : Future Labs (April 12, 2013)

State DOT Approvals, (current documentation required):

AZ, ID, KS, MI, NM, NV, NY, OH, OK, TN, VT, WA

Sample submitted: [x] yes [ ] no [ ] n/a | Materials Safety Data Sheets (MSDS): [x] yes [ ] no [ ] n/a

Notes/Additional Comments

Series 270 ES (white) is currently on the APL as a Type III, the APL Reference Number is 2818. This submission is for 271 ES (yellow) which is part of the 270 series.