

Transportation Safety Division

3M™ Stamark™ A380 ESD

High Performance Pavement Marking Tape (High tack adhesive version)

Product Bulletin Series A380 ESD

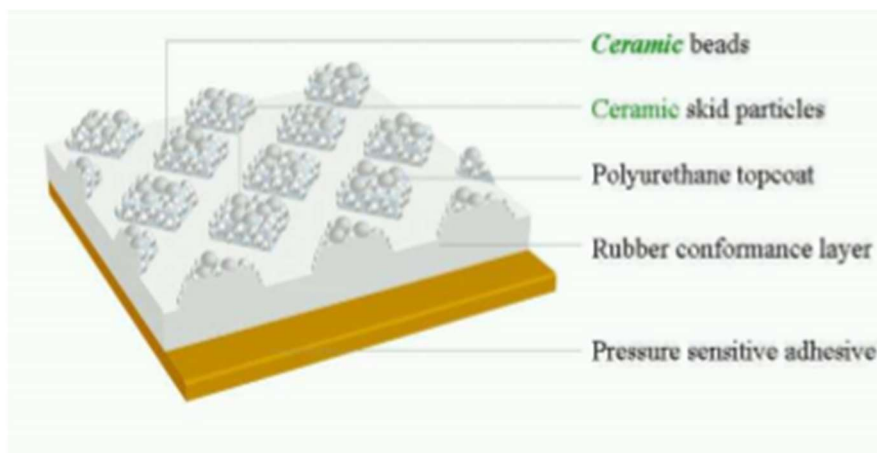
October 2021

1 Description

3M™ Stamark™ A380 ESD high performance tape is intended to be used as an Inlay marking on hot asphalt surfaces or as an Overlay marking on concrete and asphalt surfaces in locations where traffic is generally free rolling. For rough, cold asphalt surfaces the application method BitumenPlus should be used, which yields in improved adhesion of the tape compare to the overlay application method.

Series A380 ESD: used for lane lines, edge lines, channelizing lines and gore markings

2 Product construction



3 Product features

- High performance Tape Series A380 ESD is a road marking material with long-term retained retroreflectivity, skid resistance and whiteness
- Abrasion resistant ceramic beads and anti-skid particles bonded in a highly durable polyurethane topcoat
- Patterned surface that presents a near vertical face to traffic to maximize retroreflectance
- Product design which provides increased visibility under wet road conditions
- Conformable polymer layer made of high quality polymeric materials, pigments and glass beads
- Coated with pressure sensitive adhesive on bottom surface
- Nominal overall thickness of 2,5 mm

4 Product Performance

3M™ Stamark™ A380 ESD fulfils the following classes of EN 1436 in new conditions:

BAST Approval No. 2010 1DF 01.07

BAST Approval No. 2019 1DF 02.02

Q	R	R _w	S
Q 5 ≥ 200 mcd	R 5 ≥ 300 mcd	R _w 6 ≥ 150 mcd	S5 ≥ 65 SRT

Qd class: Qd values (luminance coefficient under diffuse illumination)

R class: Coefficient of retroreflected luminance following 30 m geometry

RW class: Retroreflection in wet conditions

S class: Skid Resistance value

Note: Stamark A380 ESD will be delivered with hydrophobic release coating that may influence the initial performance characteristics. Especially the measurements for R_w cannot be performed on newly applied marking, because the water forms puddles on the surface. The coating will be removed within a few weeks through normal traffic wear. See respective note in clause 5.2.3 of prEN 1790:2019.

Daytime Visibility

3M™ Stamark™ A380ESD provides a minimum initial luminance coefficient in diffuse illumination, Qd > 160 mcd·m⁻²·lx⁻¹. Values are measured in accordance with CEN Standard EN 1436 Annex A.

Reflectance Series

3M™ Stamark™ A380 ESD has initial minimum retroreflectance values (RL) listed in the following table. Values are measured in accordance with CEN Standard EN 1436 Annex B.

	White
Entrance Angle	1.24°
Observation Angle	2.29°
Retroreflected Luminance	300 mcd·m ⁻² ·lx ⁻¹

Skid Resistance

The surface of the Series 380ESD tape provides a minimum initial skid resistance value of 55 SRT. Values are measured in accordance with CEN Standard EN 1436 Annex D.

5 Application

- All applications of A380 ESD tape should be installed using the instructions in this Product Bulletin and the appropriate Information Folders. Three application methods are applicable for the 3M™ Stamark™ A380 ESD: Inlay on the hot asphalt surface, Overlay on concrete and drain and open-pore-asphalt (OPA). The concept is not to be used Overlay for melted asphalt and liquid repair asphalt for permanent tape. The BitumenPlus application use on all, especially rough, asphalt surfaces.

Applications criteria for 3M™ Stamark™ A380 ESD

30.04.2020

Road surface	Applic. System	Restriction
Concrete	3M Primer P50	no restrictions
Exposed aggregate concrete	3M Primer P50	no restrictions
Open pore asphalt (OPA) - cold	3M Primer P50 or BitumenPlus	no restrictions
Concrete, exposed aggregate concrete micro milled	3M Primer P50	no restrictions up to 3mm line spacing(LA)
Concrete, exposed aggregate concrete coarsely milled	Bit.Plus with DS01E inkl. Colzumix S	no restrictions
Asphalt surface or liquid repair asphalt	Bitumen Plus (without P50 Primer)	no restrictions
Liquide asphalt	Bitumen Plus (without P50 Primer)	no restrictions
Splittmastix - cold/old	Bitumen Plus (without P50 Primer)	no restrictions
OPA - hot	Asphalt Plus (without P50 Primer)	no restrictions
Splittmastix - hot	Asphalt Plus (without P50 Primer)	no restrictions

Applications on old markings are excluded from the warranty.

Recommendation for demarking foils or old markings:

for all road surfaces, remove using a fine milling machine or a high-pressure water milling machine.
In exceptional cases or in case of uncertainty, please contact our technical service.

Climatic and surface conditions for Overlay applications:

- Air and Surface Temperatures: +10°C and rising
- Relative Air Humidity: < 80 %
- Clean and dry surface, no rain 48 hours prior to the application.
- Always use 3M™ Stamark™ Surface Preparation Adhesive P50 for Overlay applications prior to the tape application.
- Do not apply tape on longitudinal road surface joints.

- The existing MTA-2 application equipment has to be upgraded using plasmacoated transportation roll kit **DR995032239** in order to prevent adhesive sticking.

For further details on Overlay application, please read to Information Folder IF OV. For Inlay application, please read IF AsphaltPlus and for Bitumen Plus application, please read IF BitumenPlus.

6 Product Performance References

3M™ Stamark™ A380 ESD has been homologated by independent Test institutions in Europe:

Bundesanstalt für Strassenwesen (BaSt)

Approval No. 2010 1DF 01.07

Approval No. 2019 1DF 02.02

3M™ Stamark™ A380 ESD achieved the following results on the BAST wear simulator according EN1436 and EN13197 (abstract):

Q	R	Rw	S
Q 5 ≥ 200 mcd	R 5 ≥ 300 mcd	Rw5 ≥ 100 mcd	S3 ≥ 55 SRT

LCPC approval: pending

7 General Performance Consideration

Maximum durability of 3M™ Stamark™ A380 ESD High Performance Tape will be realized when properly applied according to 3M recommendations provided in product bulletins and information folders. The durability of A380 ESD tape will depend on traffic conditions, snow removal practices, application techniques used, as well as pavement and atmospheric conditions at the time of application. Damage may be caused by heavy trucks, excessive encroachment (crossover), narrow lane width, unpaved shoulders, snow removal and ice control techniques, such as sanding. It is recommended that the customer thoroughly evaluate A380 ESD tape under the conditions in the specified location before making large- scale applications. While experience has shown that, properly applied, these materials are highly effective traffic control devices, 3M makes no generalized durability claims.

8 Storage

Store 3M™ Stamark™ A380 ESD in a cool dry area - indoors. Use siliconized paper as delivered in the box in order to separate the rolls whilst stacking without carton. Use within 12 months after receipt.

9.1 Health and Safety Information

Read all health hazard, precautionary and first aid statements found in the Material Safety Data Sheet (MSDS), and/or product label of chemicals prior to handling or use.

9.2 Disclaimer

THE 3M WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING OR OF PERFORMANCE, CUSTOM OR USAGE OF TRADE.

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10 Other Product Information

Always confirm that you have the most current version of the applicable product bulletin, information folder or other product information from 3M's Website at <http://www.mmm.com/tss>.

11 Guarantee /Liability

3M assumes no responsibility for any injury, loss or damage arising out of the use of a product that is not of our manufacture. Where reference is made in literature to a commercially available product, made by another manufacturer, it shall be the user's responsibility to ascertain the precautionary measures for its use outlined by the manufacturer. Prerequisite for the guarantee is that the tape was processed according the instruction of this and other related technical information folders

12 Literature References

For additional information on 3M™ Stamark™ Tapes, Application Instructions or 3M™ Application Equipment, refer to the following publications:

IF OV	Information Folder Overlay / P50 Application
IF AP	Information Folder Inlay / AsphaltPlus Application
IF BPlus	Information Folder BitumenPlus Application
IF PS-98	Information Folder Adhesive Spray Applicator PS-98
IF P50	Information Folder Surface Preparation Adhesive 3M™ Stamark™ P50
IF MTA2	Information Folder Manual Tape Applicator MTA-2
IF RTC-3	Information Folder Roller Tamper Cart RTC-3

Important Notice to Purchaser

All statements, technical information and recommendations herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. Before using, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. All questions of warranty and liability relating to this product are governed by the terms of the sale subject where applicable to the prevailing law. No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.

Reliant for these product-information:

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