

Transportation Safety Division

3M™ Stamark™ A650 / A651 E / A654

Temporary Removable Pavement Marking Tape

Product Bulletin Series A650 / A651 E / A654

March 2018

1 Description

3M™ Stamark™ Series A65x Temporary Removable Tape is a conformable and highly reflective marking material to be used on highway construction work zones. It can be used for longitudinal line, word and symbol applications, where removability is required.

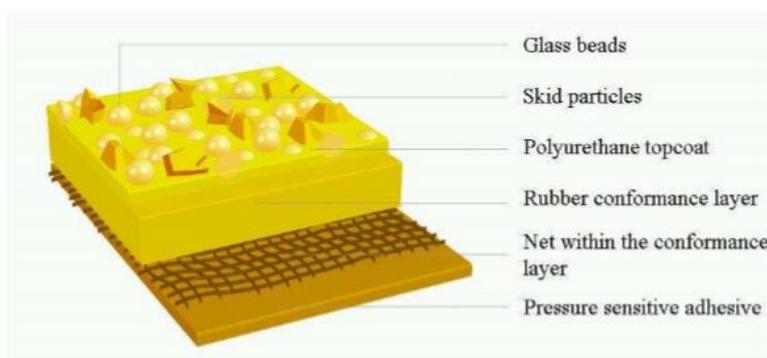
Tape Series A65x tape is available as A650 (white), A651 E (yellow) and A654 (orange). The lined L-versions are designed to be cut into words and symbols.

Series A65x: used for lane lines, edge lines, channelizing lines and gore markings

Series L65x: Legends and symbols (lined)

3M™ Stamark™ Series A65x tapes consists of a mixture of high quality polymeric materials, organic pigments for the color and fillers. A layer of beads bond to the polyurethane top surface provides excellent retro-reflective properties. The tapes are reinforced by a polyester net and coated with a pressure sensitive adhesive for easy, rapid application at temperatures above 10°C.

2 Product construction



3 Product features

- Provides highly reflective delineation
- Easy to apply by hand or by machine
- Durable for normal work zone life
- Road can be opened to traffic immediately after application
- Easy to remove intact or in large pieces
- Leaves no lasting marks
- Available in white, yellow and orange

4 Product Performance

3M™ Stamark™ A651 E (yellow) Removable Tape fulfil the following classes of EN 1436 in new condition:

R_L	Q	S
<i>R 5</i> <i>≥300 mcd</i>	<i>Q 2</i> <i>≥100 mcd</i>	<i>S2</i> <i>≥50 SRT</i>

3M™ Stamark™ A654 Tape fulfils the following classes of ONR 22441 in new condition:

R_L	β	S
<i>R 3</i> <i>≥150 mcd</i>	<i>≥0,1</i>	<i>S1</i> <i>≥45 SRT</i>

3M™ Stamark™ A654 Tape fulfils the following classes of SN 640 877 in new condition:

R_L	Q	S
<i>R 3</i> <i>≥150 mcd</i>	<i>≥80 mcd</i>	-

R_L class: Coefficient of retroreflected luminance following 30 m geometry

Q class: Qd values (retroreflection in diffused light)

β : Luminance factor

S class: Skid Resistance value

Series A65x tape has typical initial retroreflectance values listed in the following table. Values are measured in accordance with CEN Standard EN 1436 Annex B

	White (A650)	Yellow (A651 E)	Orange (654)
Entrance Angle	1.24°	1.24°	1.24°
Observation Angle	2.29°	2.29°	2.29°
Retroreflected Luminance	700	500	300

5 Application

All applications of Series A65x tape should be installed using the instructions in this Product Bulletin and the appropriate 3M Information Folders (see Literature References).

- Air and Surface Temperatures: +10°C and rising
- Relative Air Humidity: < 80 %

General surface conditions:

- Clean and dry surface, no rain 24 hours prior to the application.
- Always use 3M™ Stamark™ P50 Surface Preparation Adhesive for Overlay applications prior to the tape application.
- Apply the tape using 3M™ Application Equipment
- Tamp the tape with 3M™ tamping cart
- Butt splices must be used. Do not overlay tape ends.
- Do not apply tape on longitudinal road surface joints.

For further details on Overlay application, please read to Information Folder IF OV.

6 Product Performance References

3M™ Stamark™ Series A65x Temporary Removable Pavement Marking Tape has been homologated by independent Test institutions in Europe:

Bundesanstalt für Strassenwesen (BaSt)

Approval No. 97 1G 03.07 (A651E)

Approval report 28.03.1995 (A654)

A651 E achieved the following results on the BAST wear simulator according EN1436 and EN13197 (abstract):

Wheel hits	0	1 MM	2 MM
$R_L [mcd/(m^2lx)]$	463	304	231

Laboratoire Central des Ponts et Chaussées (LCPC)

A651 E achieved the following results on the LCPC test deck according EN1436 and EN 1824:

Months	1	3	6	12
$R_L [mcd/(m^2lx)]$	997	971	800	799

Note: The measuring equipment in 1995 was Ecolux

Approval No.: TE37H (A651E)

Removability The tape is removable from asphalt and concrete surfaces intact or in large pieces at temperatures above freezing without use of heat, solvents, grinding or sandblasting. Use the following procedure:

- Wear gloves and use a chisel-like tool to pry up the edge of the tape
- Pull Tape straight up at an angle of 90° to the pavement
- A small amount of heat may be used to help soften the adhesive when removing 3M™ Stamark™ tape at cold weather conditions.

Note: Burning is not recommended.

7 General Performance Consideration

Maximum durability of 3M™ Stamark™ Temporary Removable tapes will be realized when properly applied according to 3M recommendations provided in product bulletins and information folders. The durability of 3M™ Stamark™ (ex-Scotch-Lane™) Series A65x tape will depend on traffic conditions, snow removal practices, application techniques used, and 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 Series A65x tapes 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™ Series A65x Temporary Removable Pavement Marking Tape in a cool dry area - indoors. 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

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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 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

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Reliant for these product-information:

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