This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: D4505 – 12 (Reapproved 2017)

Standard Specification for Preformed Retroreflective Pavement Marking Tape for Extended Service Life[1]

This standard is issued under the fixed designation D4505; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers white or yellow preformed retroreflective pavement marking tape, that when applied to a road surface, will provide a service life normally greater than one year depending on wear and durability factors.

1.2 The preformed retroreflective pavement tape is suitable for longitudinal markings and transverse markings including word/symbol markings. It is designed to be a pavement marking with extended service life.

1.3 The values stated in inch-pound units are to be regarded as the standard except where noted in the document. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D1000 Test Methods for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications

D1898 Practice for Sampling of Plastics (Withdrawn 1998)[3]

D4061 Test Method for Retroreflectance of Horizontal Coatings

D6628 Specification for Color of Pavement Marking Materials

E303 Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester

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

2.2 *CIE Publications:*[4]

No. 15.2 Colorimetry

No. 39.2 Recommendations for Surface Colours for Visual Signaling

3. Terminology

3.1 *Definitions:*

3.1.1 *extended service life or period, n*—a minimum service period of twelve months when placed in accordance with the manufacturer's recommended procedures on pavement surfaces.

3.1.1.1 *Discussion*—See Section 7 for factors affecting durability.

3.1.2 *preformed tape, n*—continuous, flexible pavement marking material that is essentially complete and that may be affixed to or imbedded in the road surface without fundamentally altering its configuration.

3.1.3 *retroreflection, n*—reflection in which radiation is returned in directions close to the direction from which it came and maintained over wide variations of the direction of the incident radiation.

3.1.4 *surface pattern, n*—a pattern on the surface with areas of raised surface area.

4. Classification

4.1 *Preformed Retroreflective Pavement Marking Tape* shall be identified as:

4.1.1 Reflectivity Level I; Class 1, 2, or 3; Skid Resistance Level A or B.

4.1.2 Reflectivity Level II; Class 1, 2, or 3; Skid Resistance Level A or B.

[1] This specification is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.38 on Highway Traffic Control Materials.

Current edition approved Oct. 1, 2017. Published October 2017. Originally approved in 1985. Last previous edition approved in 2012 as D4505 – 12. DOI: 10.1520/D4505-12R17.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

[4] Available from U.S. National Committee of the CIE (International Commission on Illumination), c/o Thomas M. Lemons, TLA-Lighting Consultants, Inc., 7 Pond St., Salem, MA 01970, http://www.cie-usnc.org.

Copyright © ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. United States