



Designation: D6628 – 23

Standard Specification for Color of Retroreflective Pavement Marking Materials¹

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1. Scope

1.1 This specification covers the daytime and nighttime color of retroreflective pavement marking materials used for traffic control lane markings and symbols on road surfaces.

1.2 This specification applies to all retroreflective pavement markings (markings that include retroreflective optics residing on the surface) except structured pavement markings as defined in 3.2.5.

1.3 This specification is not applicable to pavement markings that do not include retroreflective optics on the surface.

1.4 This specification does not address any requirements other than the color of retroreflective pavement markings.

1.5 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5.1 *Exception*—This specification is noted to be an SI document, where angles are generally expressed in radians. However, as angles used in retroreflection have historically been identified in degrees, the International Committee for Weights and Measures (CIPM, Comité International des Poids et Mesures) accepts the use of degrees with SI units, and European Normatives and documents from the International Commission on Illumination (CIE) use degrees for retroreflection geometry.

1.6 *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.*

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.

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2. Referenced Documents

2.1 ASTM Standards:²

D4061 Test Method for Retroreflectance of Horizontal Coatings

D4505 Specification for Preformed Retroreflective Pavement Marking Tape for Extended Service Life

D4592 Specification for Preformed Retroreflective Pavement Marking Tape for Limited Service Life

D7585/D7585M Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments

E284 Terminology of Appearance

E308 Practice for Computing the Colors of Objects by Using the CIE System

E811 Practice for Measuring Colorimetric Characteristics of Retroreflectors Under Nighttime Conditions

E1349 Test Method for Reflectance Factor and Color by Spectrophotometry Using Bidirectional (45°:0° or 0°:45°) Geometry

E2367 Test Method for Measurement of Nighttime Chromaticity of Pavement Marking Materials Using a Portable Retroreflection Colorimeter

2.2 CIE Publications:³

No. 15.2 Colorimetry

No. 39.2 Recommendations for Surface Colours for Visual Signalling

2.3 Federal Register:⁴

23 CFR Chapter 1, Subchapter G, Part 655, Subpart F Traffic Control Devices on Federal-Aid and Other Streets and Highways

3. Terminology

3.1 Definitions:

3.1.1 Definitions in Practice E308 and of appearance terms in Terminology E284 are applicable to this specification.

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 Available from USNC-CIE Publications Office, TLA Lighting Consultants, Inc., 7 Pond Street, Salem, MA 01970.

⁴ Available from U.S. Government Publishing Office (GPO), 732 N. Capitol St., NW, Washington, DC 20401, <http://www.gpo.gov>.