



Designation: D6628 – 03

Standard Specification for Color of Pavement Marking Materials¹

This standard is issued under the fixed designation D6628; 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 the daytime and nighttime color of retroreflective pavement marking materials used for traffic control lane markings and symbols on road surfaces. It is intended to apply throughout the service life of the material.

1.2 This specification applies to both painted and tape lines, including thermoplastic, epoxy and other types.

1.3 This specification is not applicable to the testing, for quality control purposes, of marking material without added drop-on beads.

1.4 In addition, it does not describe requirements other than color such as retroreflectance.

2. Referenced Documents

2.1 ASTM Standards:²

D4061 Test Method for Retroreflectance of Horizontal Coatings

D6359 Specification for Minimum Retroreflectance of Newly Applied Pavement Marking Using Portable Hand-Operated Instruments³

E284 Terminology of Appearance

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

E808 Practice for Describing Retroreflection

E811 Practice for Measuring Colorimetric Characteristics of Retroreflectors Under Nighttime Conditions

E1349 Test Method for Reflectance Factor and Color by Spectrophotometry Using Bidirectional ($45^\circ:0^\circ$ or $0^\circ:45^\circ$) Geometry

2.2 CIE Publications:

No. 15.2 Colorimetry⁴

No. 39.2 Recommendations for Surface Colours for Visual Signalling⁴

3. Terminology

3.1 Definitions:

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

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *pavement marking structured materials*— a structured road marking has faces or edges in a regular or random pattern that are tilted towards the direction of traffic in order to enhance retroreflection in wet or rainy conditions or to produce acoustic or vibrational effects by the passage of wheels, or both. The pattern can be produced by non-uniform application of material in the liquid state, by reworking the surface of applied material while still liquid, or by other suitable means.

4. Significance and Use

4.1 This specification is intended for use during the lifetime of the retroreflective pavement marking on the road surface. Specifications for characteristics other than color are found in other ASTM documents.

5. Performance Requirements

5.1 *Chromaticity Limits*—The material must plot within the boundaries described by the four corner points listed in Tables 1 and 2 when measured in accordance with the test methods in Section 7.

5.1.1 *Table 1*—Daytime (x,y) chromaticity coordinates of the corners of the regions for the colors of white, yellow, blue and red pavement markings.

5.1.2 *Table 2*—Nighttime (x,y) chromaticity coordinates of the corners of the regions for the colors of white and yellow pavement markings.

5.1.3 *Chromaticity and Retroreflectance*— The third dimension of the perceived appearance of the road marking at night is the retroreflectance. This quantity is specified in other ASTM documents on pavement markings and is not part of pavement marking nighttime color specification. Research has shown that

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 Jan. 10, 2003. Published April 2003. Originally approved in 2001. Last previous edition approved in 2001 as D6628-01. DOI: 10.1520/D6628-03.

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 Withdrawn. The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from USNC-CIE Publications Office, TLA Lighting Consultants, Inc., 7 Pond Street, Salem, MA 01970.