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Standard Specification for Retroreflective Sheeting for Traffic Control¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers flexible, non-exposed glass bead lens and microprismatic, retroreflective sheeting designed for use on traffic control signs, delineators, barricades, and other devices.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 The following safety hazards caveat pertains only to the test methods portion, Section 7, of this specification. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

B 209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate²

B 209M Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]²

B 449 Practice for Chromate Treatments on Aluminum³

D 523 Test Method for Specular Gloss⁴

E 284 Terminology of Appearance⁴

E 308 Practice for Computing the Colors of Objects by Using the CIE System⁴

E 808 Practice for Describing Retroreflection⁴

E 810 Test Method for Coefficient of Retroreflection or Retroreflective Sheeting⁴

E 991 Practice for Color Measurement of Fluorescent Specimens⁴

E 1164 Practice for Obtaining Spectrophotometric Data for Object-Color Evaluation⁴

E 1347 Test Method for Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry⁴

E 1349 Test Method for Reflectance Factor and Color by Spectrophotometry Using Bidirectional Geometry⁴

G 7 Practice for Atmospheric Environmental Exposure Testing of Nonmetallic Materials⁵

G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials⁵

G 147 Practice for Conditioning and Handling of Nonmetallic Materials for Natural and Artificial Weathering Tests⁵

G 152 Practice for Operating Open-Flame Carbon-Arc Light Apparatus for Exposure of Nonmetallic Materials⁵

G 153 Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials⁵

2.2 Federal Specifications:

FP-92 Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects⁶

L-S-300C Federal Specification for Sheeting and Tape, Reflective: Non Exposed Lens⁷

2.3 AASHTO Specification:

M 268-84 I⁸

3. Terminology

3.1 *Definitions*—Definitions of terms are as described in Terminology E 284 and Practice E 808.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *reboundable sheeting, n*—retroreflective material intended to be attached to flexible impact resistant plastic devices, such as traffic drum-like channelizing devices.

4. Classification

4.1 Retroreflective sheeting shall consist of a white or colored sheeting having a smooth outer surface and that essentially has the property of a retroreflector over its entire surface. There are six types and five classes of retroreflective sheeting. Typical examples of materials and applications are provided for descriptive information only and are not intended to be limitations or recommendations.

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 Materials.

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² *Annual Book of ASTM Standards*, Vol 02.02.

³ *Annual Book of ASTM Standards*, Vol 02.05.

⁴ *Annual Book of ASTM Standards*, Vol 06.01.

⁵ *Annual Book of ASTM Standards*, Vol 14.02.

⁶ Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

⁷ Available from General Services Administration, 470 East L'Enfant Plaza S.W., Suite 8100, Washington, DC 20407.

⁸ Available from the American Association of State Highway and Transportation Officials, 444 N. Capitol St., N.W., Washington, DC 20001.