



Standard Specification for Reinforced Thermosetting Plastic Poles¹

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1. Scope

1.1 This specification covers reinforced thermosetting plastic poles used for outdoor lighting. Such poles may be applicable to electric power and telecommunication distribution installations.

1.2 The design parameters of the poles shall be agreed upon by the purchaser and supplier and should take into consideration the anticipated service conditions of installation and transportation of the product.

1.3 This specification includes poles with above-ground or standard mounting height of 10 ft (3.05 m) through 50 ft (15.24 m). Two classes of poles are covered, one of standard design, the other of stiff design.

1.4 The values stated in inch-pound units are to be regarded as standard. Equivalent SI units are indicated in parentheses.

1.5 The following precautionary caveat pertains only to the test methods portion of this specification, Section 10: *This standard does not purport to address all of the safety problems, 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:

- A 153 Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware²
- C 131 Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine³
- D 149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies⁴
- D 257 Test Methods for D-C Resistance or Conductance of Insulating Materials⁴
- D 635 Test Method for Rate of Burning and/or Extent and

Time of Burning of Self-Supporting Plastics in a Horizontal Position⁵

D 883 Terminology Relating to Plastics⁵

D 1435 Practice for Outdoor Weathering of Plastics⁵

D 2565 Practice for Operating Xenon Arc-Type Light-Exposure Apparatus With and Without Water for Exposure of Plastics⁶

D 4329 Practice for Operating Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Plastics⁷

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁷

E 691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method⁷

G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials⁸

G 26 Practice for Operating Light-Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials⁸

G 53 Practice for Operating Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials⁸

2.2 AASHTO Standard:

Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 1985⁹

3. Terminology

3.1 *Definitions: General*—All other terms not specifically defined shall be in accordance with Terminology D 883.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *anchor base*—a device attached to the bottom end of a pole designed to be mounted on an accommodating platform.

3.2.2 *arm*—a structural member, approximately perpendicular to a pole, that supports a luminaire.

3.2.3 *direct burial*—a term used to refer to a pole designed to be supported by surrounding earth (soil). (See also 3.2.9)

3.2.4 *effective projected area (EPA)*—maximum projected area of an object multiplied by a drag coefficient (C_d) for the specific shape of the object.

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.18 on Reinforced Thermosetting Plastics.

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² Annual Book of ASTM Standards, Vol 01.06.

³ Annual Book of ASTM Standards, Vol 04.02.

⁴ Annual Book of ASTM Standards, Vol 10.01.

⁵ Annual Book of ASTM Standards, Vol 08.01.

⁶ Annual Book of ASTM Standards, Vol 08.02.

⁷ Annual Book of ASTM Standards, Vol 14.02.

⁸ Annual Book of ASTM Standards, Vol 06.01.

⁹ Available from the American Association of State Highway and Transportation Officials, 444 North Capitol St N.W., Washington, DC 20001.