



Standard Specification for Glass-Fiber-Reinforced Polyester Plastic Panels¹

This standard is issued under the fixed designation D 3841; 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.

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

1. Scope *

1.1 This specification covers the classification, materials of construction, workmanship, minimum physical requirements, and methods of testing glass-fiber reinforced polyester plastic panels intended for use in construction. Panels for specialized or unique applications may require values significantly above or below those stated in this specification. Recommended practices for certain specific applications are included as Appendix X1. This specification is not intended to restrict or limit technological changes affecting performance when those changes are agreed upon between the purchaser and the seller.

1.2 Supplementary information on chemical resistance, resistance to heat, and installation practices are provided in Appendix X1.

1.3 The classification of these plastic panels into types based on relative response to a laboratory test shall not be considered a fire hazard classification.

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

1.5 The text of this standard references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in Tables and Figures) shall not be considered as requirements of this standard.

1.6 *Laboratory flammability tests (Test Methods D 635, D 1929, D 2843, and E 84) applicable to this standard should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of these tests may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.*

1.7 The following precautionary caveat pertains only to the test method portion, Section 8 of this specification. *This specification 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 specification to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

NOTE 1—There are no ISO standards covering the subject matter of this specification.

2. Referenced Documents

2.1 ASTM Standards:

D 570 Test Method for Water Absorption of Plastics²

D 618 Method for Conditioning Plastics and Electrical Insulating Materials for Testing²

D 635 Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position²

D 638 Test Method for Tensile Properties of Plastics²

D 696 Test Method for Coefficient of Linear Thermal Expansion of Plastics²

D 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials²

D 883 Terminology Relating to Plastics²

D 1435 Practice for Outdoor Weathering of Plastics²

D 1494 Test Method for Diffuse Light Transmission Factor of Reinforced Plastic Panels²

D 1600 Terminology for Abbreviated Terms Relating to Plastics²

D 1929 Test Method for Ignition Properties of Plastics³

D 2843 Test Method for Density of Smoke from the Burning or Decomposition of Plastics³

D 3892 Practice for Packaging/Packing of Plastics⁴

D 4364 Practice for Performing Accelerated Outdoor Weathering of Plastics Using Concentrated Natural Sunlight⁴

E 72 Method for Conducting Strength Tests of Panels for Building Construction⁵

E 84 Test Method for Surface Burning Characteristics of Building Materials⁵

E 424 Test Method for Solar Energy Transmittance and

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² Annual Book of ASTM Standards, Vol 08.01.

³ Annual Book of ASTM Standards, Vol 08.02.

⁴ Annual Book of ASTM Standards, Vol 08.03.

⁵ Annual Book of ASTM Standards, Vol 04.07.