



Designation: D4397 – 16 (Reapproved 2023)

Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications¹

This standard is issued under the fixed designation D4397; 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 U.S. Department of Defense.

1. Scope

1.1 This specification covers polyethylene sheeting, 250 μm (0.010 in. or 10 mils) or less in thickness, intended for construction, industrial, and agricultural applications.

1.2 The values stated in SI units are to be regarded as the standard.

1.3 The following precautionary statement pertains only to the test methods portion, Section 8 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *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.*

NOTE 1—There is no known ISO equivalent to this standard.

1.5 *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.*

2. Referenced Documents

2.1 ASTM Standards:²

D618 Practice for Conditioning Plastics for Testing

D882 Test Method for Tensile Properties of Thin Plastic Sheeting

D883 Terminology Relating to Plastics

D1505 Test Method for Density of Plastics by the Density-Gradient Technique

D1709 Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method

D2103 Specification for Polyethylene Film and Sheeting

D3892 Practice for Packaging/Packing of Plastics

D4976 Specification for Polyethylene Plastics Molding and Extrusion Materials

D6988 Guide for Determination of Thickness of Plastic Film Test Specimens

E96/E96M Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials

E1347 Test Method for Color and Color-Difference Measurement by Tristimulus Colorimetry

F88/F88M Test Method for Seal Strength of Flexible Barrier Materials

2.2 Military Standard:

MIL-STD-1916 DoD Preferred Methods for Acceptance of Product³

3. Terminology

3.1 **Definitions**—The plastics terminology used in this specification is in accordance with the definitions given in Terminology D883.

3.2 **Definitions of Terms Specific to This Standard:**

3.2.1 **nominal length**—the length of sheeting in any roll, as specified on product labels, invoices, sales literature, and the like.

3.2.2 **nominal net weight**—the weight of sheeting in any roll, as specified on product labels, invoices, sales literature, and the like.

3.2.3 **nominal thickness**—the thickness of sheeting in any roll, as specified on product labels, invoices, sales literature, and the like.

3.2.4 **nominal width**—the width of sheeting in any rolls, as specified on product labels, invoices, sales literature, and the like.

³ Available online at <http://quicksearch.dla.mil>.

¹ This specification is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.19 on Film, Sheeting, and Molded Products.

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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.

*A Summary of Changes section appears at the end of this standard