



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

This standard is issued under the fixed designation D 4397; 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 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 and health practices and determine the applicability of regulatory limitations prior to use.*

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

2. Referenced Documents

2.1 ASTM Standards:

- D 374 Test Methods for Thickness of Solid Electrical Insulation²
- D 618 Practice for Conditioning Plastics and Electrical Insulating Materials for Testing³
- D 882 Test Methods for Tensile Properties of Thin Plastic Sheeting³
- D 883 Terminology Relating to Plastics³
- D 1505 Test Method for Density of Plastics by the Density-Gradient Technique³
- D 1709 Test Method for Impact Resistance of Polyethylene Film by the Free Falling Dart Method³
- D 1898 Practice for Sampling of Plastics³
- D 2103 Specification for Polyethylene Film and Sheeting³
- D 3892 Practice for Packaging/Packing of Plastics⁴
- E 96 Test Methods for Water Vapor Transmission of Materials⁵
- E 1347 Test Method for Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry⁶

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

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² Annual Book of ASTM Standards, Vol 10.01.

³ Annual Book of ASTM Standards, Vol 08.01.

⁴ Annual Book of ASTM Standards, Vol 08.02.

⁵ Annual Book of ASTM Standards, Vol 04.06.

surement by Tristimulus (Filter) Colorimetry⁶

F 88 Test Methods for Seal Strength of Flexible Barrier Materials⁷

2.2 Military Standard:

MIL-STD-105 Sampling Procedures and Tables for Inspection by Attributes⁸

3. Terminology

3.1 *Definitions*—The plastics terminology used in this specification is in accordance with the definitions given in Terminology D 883.

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.

4. Materials

4.1 The sheeting shall be made from polyethylene or modified polyethylene, such as an ethylene copolymer consisting of a major portion of ethylene in combination with a minor portion of some other monomer, or a mixture of polyethylene with a lesser amount of other polymers.

NOTE 2—Polyethylene sheeting is made in a variety of colors, opacities, translucencies, and dimensions. It is recommended that manufacturers be consulted on the varieties available.

5. General Requirements

5.1 *Appearance*—The sheeting shall have appearance qualities conforming with those produced by good commercial

⁶ Annual Book of ASTM Standards, Vol 06.01.

⁷ Annual Book of ASTM Standards, Vol 15.09.

⁸ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

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