



Designation: D8065/D8065M – 16 (Reapproved 2023)

Standard Classification System and Basis for Specification for Specifying Plastic Films¹

This standard is issued under the fixed designation D8065/D8065M; 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 standard provides a classification system for tabulating the properties of unfilled, single-layer plastic films.

NOTE 1—The classification system serves many of the needs of industries using plastic films. The standard is subject to revision as the need requires; therefore, the latest revision should always be used.

NOTE 2—Film is defined in Terminology D883 as an optional term for sheeting having a nominal thickness no greater than 0.25 mm [0.010 in.].

1.2 The classification system and subsequent line call-out (specification) is intended to be a means of identifying plastic films used for applications including industrial, packaging, construction, and agriculture. It is not intended for the selection of materials to be used in films. This selection should be made by those having expertise in the plastics field after careful consideration of the end-use requirements, the environment to which the films will be exposed, the fabrication process to be employed, the inherent properties of the material not covered in this document, and the economic factors.

1.3 This classification system is based on the premise that plastic films can be arranged into broad generic families based on materials with similar composition using basic film properties. A system is thus established which, together with values describing additional requirements, permits as complete a description as desired of the selected film.

1.4 In all cases where the provisions of this classification system would conflict with the referenced ASTM specification for a particular film product, the latter shall take precedence.

NOTE 3—It is strongly recommended that this classification system be used for all new applications and specifications and that the specification of films using existing standards be expeditiously withdrawn or converted to this classification system.

1.5 This classification system applies to commercial products and, as such, there is no control over the manufacturing parameters employed in producing the film. It shall be the responsibility of those developing the specification documents

utilizing this classification system to identify the critical parameters and values to be used for the cell classifications and suffix requirements.

1.6 *Units*—The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.7 *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.*

NOTE 4—There is no known ISO equivalent to this standard.

1.8 *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:

D149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies

D150 Test Methods for AC Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulation

D257 Test Methods for DC Resistance or Conductance of Insulating Materials

D774/D774M Test Method for Bursting Strength of Paper (Withdrawn 2010)²

D882 Test Method for Tensile Properties of Thin Plastic Sheeting

D883 Terminology Relating to Plastics

D1003 Test Method for Haze and Luminous Transmittance of Transparent Plastics

D1004 Test Method for Tear Resistance (Graves Tear) of

¹ This standard 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.

Current edition approved Nov. 1, 2023. Published November 2023. Originally approved in 2016. Last previous edition approved in 2016 as D8065/D8065M – 16. DOI: 10.1520/D8065_D8065M-16R23.

² The last approved version of this historical standard is referenced on www.astm.org.