



Designation: D6868 – 03

# Standard Specification for Biodegradable Plastics Used as Coatings on Paper and Other Compostable Substrates<sup>1</sup>

This standard is issued under the fixed designation D6868; 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 biodegradable plastics and products (including packaging), where plastic film or sheet is attached (either through lamination or extrusion directly onto the paper) to substrates and the entire product or package is designed to be composted in municipal and industrial aerobic composting facilities.

1.2 This specification is intended to establish the requirements for labeling of materials and products, including packaging, using coatings of biodegradable plastics, as “compostable in municipal and industrial composting facilities.”

1.3 The properties in this specification are those required to determine if products (including packaging) using plastic films or sheets will compost satisfactorily, including biodegrading at a rate comparable to known compostable materials. Further, the properties in the specification are required to assure that the degradation of these materials will not diminish the value or utility of the compost resulting from the composting process.

1.4 This standard does not describe contents or their performance with regard to compostability or biodegradability.

1.5 *The following safety hazards caveat pertains to the test methods portion of this standard: 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 health and safety practices and to determine the applicability of regulatory limitations prior to use.*

NOTE 1—No equivalent ISO specifications exist for this standard.

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

**D883 Terminology Relating to Plastics**

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.96 on Environmentally Degradable Plastics.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

**D5338 Test Method for Determining Aerobic Biodegradation of Plastic Materials Under Controlled Composting Conditions**

**D6002 Guide for Assessing the Compostability of Environmentally Degradable Plastics**

**D6400 Specification for Compostable Plastics**

**2.2 Organization for Economic Development (OECD) Standard:**

**OECD Guideline 208 Terrestrial Plants, Growth Test<sup>3</sup>**

**2.3 Comite Europeen de Normalisation (CEN):**

**EN 13432 Packaging-Requirements for Packaging Recoverable through Composting and Biodegradation-Test Scheme and Evaluation Criteria for the Final Acceptance of Packaging<sup>4</sup>**

**2.4 ISO Standards:<sup>4</sup>**

**ISO 14851 Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium—Method by measuring the oxygen demand in a closed respirometer**

**ISO 14852 Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium—Method by analysis of evolved carbon dioxide**

**ISO 14855 Evaluation of the Ultimate Aerobic Biodegradability and Disintegration of Plastics under Controlled Composting Conditions-Method by Analysis of Evolved Carbon Dioxide**

**ISO 16929 Determination of the degree of disintegration of plastic materials under defined composting conditions in a pilot-scale test**

**2.5 Government Standard:**

<sup>3</sup> Available from Organization for Economic Development, Director of Information, 2 rue Andre Pascal, 75775 Paris Cedex 16, France.

<sup>4</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.