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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

BB/T 0041-2021

**Multi-layer co-extrusion barrier film for packaging
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" drafted.

This document replaces BB/T 0041-2007 "General Rules for Multilayer Co-extruded Barrier Films for Packaging". Compared with BB/T 0041-2007, except the structure in addition to adjustments and editorial changes, the main technical changes are as follows.

- Changed the name of the standard and removed the word "General Principles" (see the name of the standard, the standard name of the 2007 edition);
- Changed the scope of application (see Chapter 1, Chapter 1 of the 2007 edition);
- Changed the appearance quality requirements (see 5.1, 5.2 of the 2007 edition);
- Changed the requirements for width deviation (see 5.2.1, 5.1.1 of the 2007 edition);
- Changed the requirements for the number of joints per volume and the length of each section (see 5.2.3, 5.1.3 of the 2007 edition);
- Changed the items and requirements of physical properties, increased the requirements for nominal strain at break, deleted the requirements of heat sealing strength and tearing performance the requirements for puncture resistance and water vapor transmission rate have been changed (see 5.3 Table 6, 5.3.1.2, 2007 edition, 5.3.1.2, 2007 edition 5.3.1.3, 6.4.2, 6.4.3, 5.3.1.4, 5.3.2);
- Deleted the hygienic performance requirements (5.4 of the 2007 edition);
- Deleted the requirement for heavy metal content (version 5.5 in 2007);
- Changed the testing method of breaking force (see 6.4.1, 6.4.1 of the 2007 edition);
- Changed the detection method of puncture resistance (see 6.4.6, 6.4.4 of the 2007 edition);

- Changed the detection method of oxygen transmission rate (see 6.5, 6.4.8 of the 2007 edition);
- Deleted the test method for hygienic performance (6.5 of the 2007 edition);
- Changed the sampling plan (see 7.2.2, 7.2.2 of the 2007 edition);
- Changed the qualification criteria for factory inspection (see 7.3.2.1, 7.3.2.1 of the 2007 edition);
- Deleted Appendix A and Appendix B (Appendix A and Appendix B of the 2007 edition).

1 Scope

This document specifies the product classification, requirements, test methods, inspection rules of multilayer co-extruded barrier films for packaging (hereinafter referred to as co-extrusion films) and marking, packaging, transportation and storage.

This document is applicable to the thickness of 0.02mm~0.30mm with ethylene-vinyl alcohol copolymer (EVOH), polyvinylidene chloride Oxygen barrier resins such as (PVDC), polyamide (PA) and other resins are produced by co-extrusion process with multi-layer co-extrusion with barrier properties barrier film.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 191 Graphical signs of packaging, storage and transportation GB/T 1040.3-2006 Determination of Tensile Properties of Plastics Part 3: Test Conditions for Films and Sheets GB/T 2035 Plastic Terms and Definitions GB/T 2410 Determination of transmittance and haze of transparent plastics GB/T 2828.1-2012 Counting Sampling Inspection Procedures Part 1: Lot-by-Lot Inspection Sampling Retrieved by Acceptance Quality Limit (AQL) plan GB/T 2918 Standard Environment for Conditioning and Testing of Plastic Specimens GB/T 6672 Plastic Film and Sheet Thickness Determination Mechanical Measurement Method GB/T 6673 Determination of length and width of plastic films and sheets GB/T 8808 Soft composite plastic material peeling test method GB/T 9639.1-2008 Test method for impact resistance of plastic films and sheets - Free-fall dart method - Part 1: Cascade method GB/T 19789 Packaging Materials Plastic Film and Sheet Oxygen Permeability Test Coulometric Test Method GB/T 26253 Determination of Water Vapor Transmission Rate of Plastic Films and Sheets by Infrared Detector Method GB/T 37841 Test method for puncture resistance of plastic films and sheets

3 Terms and Definitions

GB/T 2035 and the following terms and definitions apply to this document.

Multi-layer co-extrusion barrier film A multi-layer composite film obtained by extruding the melt of barrier resin and other resins through a common die.

4 Product categories

The co-extruded barrier film is divided into three categories. A, B, and C according to the resin type of the barrier layer, as shown in Table 1.