

ICS 29.035.99

CCS K15



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

GB/Z 21212-2007

Polyester film for membrane switches

薄膜开关用聚酯薄膜

Issued on: December 3, 2007

Implemented on: December 3, 2007

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

Foreword	I
1 Scope	1
2 Normative references	1
3 Classification	1
4 Requirements	1
4.1 Appearance	1
4.2 Film roll, joints and core	1
4.3 Dimensions	1
4.3.1 Thickness and tolerance	1
4.3.2 Roll diameter, width and limit deviations	1
4.4 Performance requirements	2
5 Test methods	3
5.1 Sampling, pretreatment conditions and test conditions	3
5.2 Appearance, film roll and core	3
5.3 Thickness	3
5.4 Length	3
5.5 Roll diameter and width	3
5.6 Density	3
5.7 Melting point	3
5.7.1 Meniscus method	3
5.7.2 Differential scanning calorimetry (DSC) method	3
5.8 Relative permittivity and dielectric dissipation factor	3
5.9 Volume resistivity	3
5.10 Surface resistivity	3
5.11 Dimensional stability at high temperature	3
5.11.1 Dimensional stability under tension	3
5.11.2 Dimensional stability under pressure	3
5.12 Tensile strength and elongation at break	3
5.13 Shrinkage	3
5.14 Power-frequency electric strength	3
5.15 Surface roughness	4
5.15.1 Principle of the test	4

5.15.2 Test apparatus and materials	4
5.15.3 Preparation of the specimens	4
5.15.4 Test procedure	4
5.15.5 Calculation and expression of the results	4
5.16 Wetting tension	4
6 Inspection rules	4
7 Marking, packaging, transport and storage	4

Foreword

This guidance document refers to the DuPont EL polyester film product standard and GB 12802.2-2004 "electrical insulation film" Part 2. Polyester film for electrical insulation. This guidance technical document was proposed by the China Electrical Equipment Industry Association. This guidance document is under the jurisdiction of the National Technical Committee for Standardization of Insulation Materials (SAC/TC51). This guiding technical document was drafted by: Oriental Insulation Materials Co., Ltd. The main drafters of this guiding technical document. Luo Chunming, Zhao Ping. This guidance document is for the first time. GB /Z21212-2007 Polyester film for membrane switch

1 Scope

This guiding technical document specifies the requirements, the test methods, the inspection rules and the provisions on marking, packaging, transport and storage for polyester film for membrane switches. This guiding technical document applies to film made from polyethylene terephthalate by casting and biaxial orientation, and applies to the membrane switch and flexible printed circuit board manufacturing industry.

This guidance document specifies the requirements, test methods, inspection rules, marking, packaging, transportation and packaging of polyester film for membrane switches. Storage. This guidance document applies to films made from polyethylene terephthalate through cast slab and biaxially oriented stretching. Membrane switch and flexible circuit board manufacturing industry.

2 Ultra-low heat shrinkage, atomized film

4.1 Appearance The film is supplied in rolls, the surface of the film should be smooth and smooth, and there should be no defects such as wrinkles, tears, particles, bubbles, pinholes and foreign matter. The edges should be neat and undamaged.

4.2 Film rolls, joints and dies Film rolls, joints and dies shall comply with the provisions of 4.2,

4.4 of GB/T 13542-1992.

4.3.1 Thickness and tolerance The thickness ranges from 50 μm to 150 μm , and preferred nominal thicknesses are recommended. 75 μm , 100 μm , 125 μm , 150 μm . The thickness tolerance of the film of 100 μm and below is $\pm 5\%$ of the nominal thickness, and the thickness tolerance of the film larger than 100 μm is the nominal thickness $\pm 4\%$.

4.3.2 Winding diameter, width and limit deviation The specifications of the roll diameter and width are determined by negotiation between the supplier and the buyer. The recommended width is 500mm and 1000mm. Film can be added according to user requirements GB /Z21212-2007

3 Classification

The film is divided into two models according to its characteristics, as shown in Table 1.

Table 1 film model Model characteristics 1 ultra low heat shrinkage, transparent film