



## BOPET Film for Capacitors and Thermal Transfer Ribbons

### 1、 Characteristics

It is stretched in biaxial orientation by mean of flat film method by using imported polyethylene terephthalate in electrical grade. Being characterized by high tensile strength and dielectric constant, low dielectric dissipation factor, high uniformity of film thickness, excellent electric property, high electrical resistance and etc, it is widely used as capacitor dielectric and insulation layer.

### 2、 Applications


It is mainly used in metalized-film capacitor and foil type capacitor, such as energy-saving lamp capacitor, DC capacitor and etc.

### 3、 Specifications

Size (μm)	WMV (μm)	MMV (μm)	test method
2.4	2.4±0.1	2.6±5%	GB/T 13542.2-2009/4
2.7	2.7±0.1	2.9±5%	
3.0	3.0±0.1	3.2±5%	
3.3	3.3±0.1	3.5±5%	
3.5	3.5±0.1	3.7±5%	
3.7	3.7±0.1	3.9±5%	
3.8	3.8±0.1	4.0±5%	
4.2	4.2±0.1	4.4±4%	
4.3	4.3±0.1	4.5±4%	
4.6	4.6±0.1	4.8±4%	
4.8	4.8±0.1	5.0±4%	
5.4	5.4±0.1	5.6±4%	
5.6	5.6±0.1	5.8±3%	
5.8	5.8±0.1	6.0±3%	
6.0	6.0±0.3	6.2±3%	
6.5	6.5±0.3	6.8±3%	
6.8	6.8±0.3	7.1±3%	
7.4	7.4±0.3	7.7±3%	
7.8	7.8±0.3	8.1±3%	
8.4	8.4±0.3	8.7±2.5%	
9.8	9.8±0.3	10.1±2.5%	
11.3	11.3±0.4	11.6±2.5%	
11.5	11.5±0.4	11.8±2.5%	
11.8	11.8±0.4	12.1±2.0%	



12.0	12.0±0.4	12.3±2.0%	
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Width of the finished film roll	mm	500±2, 620±2 or as customer' s requirement	
Inner diameter (D <sub>0</sub> )	mm	Φ152.4	 Picture
Outer diameter (D)	mm	300-500	

**Note:For special specifications, please discuss with us separately.**

#### 4、Thickness Representation

The nominal value of the film thickness is indicated by the central value (integer value, such as 3, 5, 7, 10, 15) of film thickness plus mantissa (one point after decimal point) or its code. Our nominal value for BOPET film thickness is represented in WMV.

#### 5、Technical features (typical value)

Item	Unit	Typical value	Testing standard	
Density	g/cm <sup>3</sup>	1.400±0.005	GB/T 13542.2-2009/11	
melting point	℃	256	GB/T 13542.2-2009/23	
Tensile strength	MD	MPa	200	GB/T 13542.2-2009/11
	TD	MPa	280	GB/T 13542.2-2009/11
Elongation at break	TM	%	100	GB/T 13542.2-2009/11
	TD	%	90	GB/T 13542.2-2009/11
Elastic modulus	MD	MPa	3500	GB/T 13542.2-2009/11
	TD	MPa	3500	GB/T 13542.2-2009/11
Thermal shrinkage	MD	%	2.0	GB/T 13542.2-2009/23 (150℃/30min)
	TD	%	1.0	
Surface roughness	μm	0.085±0.020	GB/T 13542.2-2009/8	
BDV (DC) (Average)	V/μm	450	SKC Method	
Coefficient of Friction (static/dynamic)		0.3-0.5	GB/T 10006-1988	
Relative permittivity		3.2	GB/T 13542.2-2009/17.1	
Volume resistivity	Ω.m	>10 <sup>15</sup>	GB/T 13542.2-2009/16.1	
Dielectric dissipation factor		5.0×10 <sup>-3</sup>	GB/T 13542.2-2009/17.1	



◆The above parameters are non-technical agreement, for reference only.

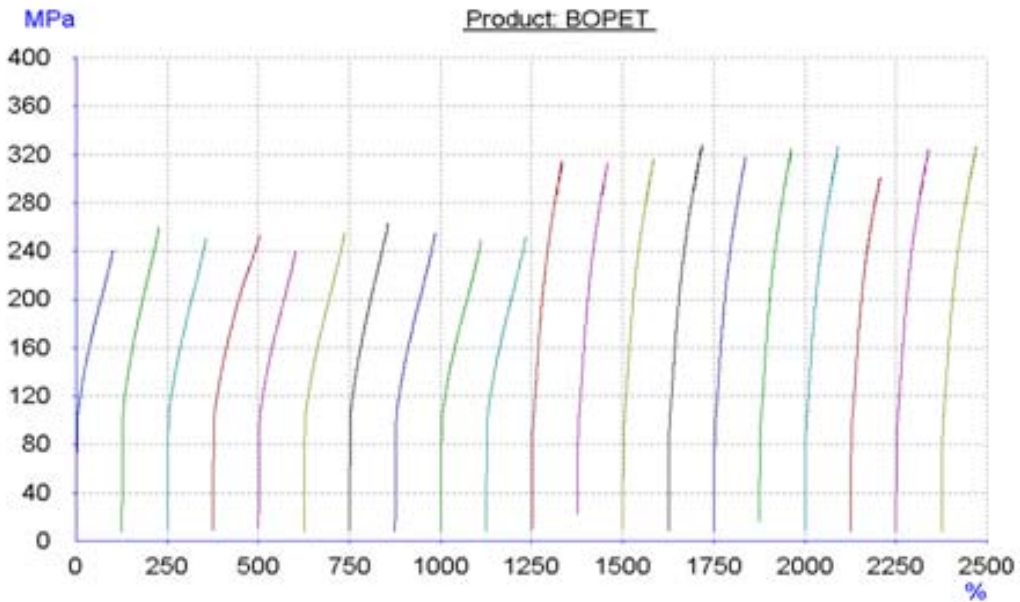
### 6、Electrical Weakness Point

Nominal Thickness (μm)	Number of Electrical Weakness Point 300V/μm
<4	≤1.0
4-6	≤0.6
≥6	≤0.2

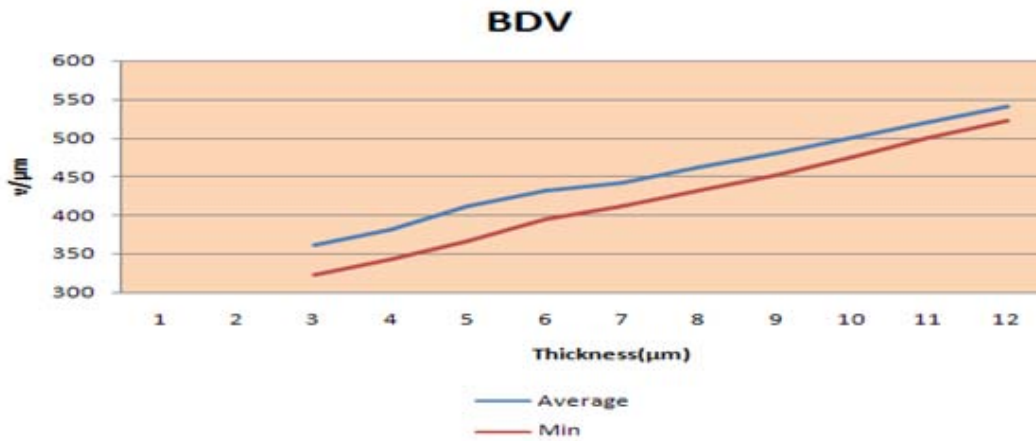
### 7、Chemical Properties

It is of good chemical resistance and oil resistance.

### 8、Curve of tensile strength



### 9、Curves of BDV and Film Thickness



### 10、packaging



Two bags of desiccant and a label are put in each film roll. For preventing from any pollutant, each film roll shall be put into a plastic bag in both sides tightened with lashing bands. And, foam gasket(about 4mm in thickness)shall be put to separate the wooden plate for protectingthe end face of film roll. And then, the film roll is put into the cartonwith adhesive tape to seal. Each tray of products shall be wrapped with stretch film. (see below picture)



## 11、Storage

All kinds of vibration and shocks shall be avoided to the film rolls in storage and transportation. The rolls shall be stored not more than one year in a dry place. Temperature exceeding 30°C shall be avoided during transport and storage. If the film is stored for more than one year, the film properties shall beevaluated again.



12、 Labelling

Each roll is equipped with two labels, which are placed on the outer surface of the carton box and inside the box, as below

**Skyrol** <sup>®</sup>

Polyester Film



Type	<b>SC42</b>	Item No.	<b>000784</b>
Thickness	<b>5.6</b>	micron	
width	<b>620</b>	mm	
length	<b>20500</b>	m	
Weight	<b>99.6</b>	kg	
Core	<b>6</b>	inch	
Grade			
Splice	<b>3000</b>		

Roll No. **1160909090909-3**



**TSF CO., LTD**

The contents of label

1. 1. Label

The self-adhesive label in red and grey shall be used to distinguish the winding direction of film roll. The label containing the following contents shall be posted:

1. 1. 1. 1.

Name of product:

1. 1. 1. 2.

Type: SC42;

SC42 ----- High-class products for SKC



TS11 ----- High-class products for sale at home

1. 1. 1. 3.

Specifications (thickness, width, length): 5.6 $\mu$ m (nominal thickness) , 620mm, 20500m

1. 1. 1. 4.

Weight(net weight): 99.6kg

1. 1. 1. 5.

Core: inner diameter 6 inches

1. 1. 1. 6.

Grade of product: high-class product

1. 1. 1. 7.

Joints: no joints

1. 1. 1. 8.

Batch number and date of manufacture: 1160523060101;

1. 1. 1. 9.

green purchasing logo

1. 1. 2.

Description of roll number

Roll number is used to identify slitting date and position of each film roll.

(For example) Roll number: 1160523060101

1160523060101

①      ②      ③      ④      ⑤      ⑥      ⑦      ⑧

② Manufacturing machine No.

③ Year of production

④ Month of production

⑤ Day of production

⑥ Production lotnumber

⑦ Slitting number

⑧ Slitting position

⑨ Slitting machine (No.1 Slitting machine: no sign; No.2 Slitting machine: -2; No.3 Slitting machine: -3)