



安徽铜峰电子股份有限公司
Anhui Tongfeng Electronics Co., Ltd

产品规格书

Product Specification

产品名称/Produce Name: 电容器用双向拉伸聚丙烯粗化薄膜

BOPP film for capacitor type RPP/RRPP

版 本/ Revision: A/0

版本 Revision	日期 Date	版本更新记录 Change contents	核准 Approved
A/0	2019-08-08	基本功能	束庆忠
A/0	2021-04-30	产品规格改成数字表示	束庆忠
A/0	2025-08-06	外单样式更改	束庆忠

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电容器用双向拉伸聚丙烯粗化薄膜

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1、基础信息 Basic information

特点 Characteristic	采用进口超高纯度电工级均聚聚丙烯树脂，经平膜法双向拉伸而成。具有厚薄均匀性好，产品空隙率控制均匀、工作场强高、介质损耗小、与多种电容器浸渍油相容性好，易卷制。 It is stretched in biaxial orientation by means of flat film method by adopting imported high purity homo polymerized polypropylene resin in electrical. It is characterized by the followings, namely good thickness uniformity, accurate and even space factor(SF) of product, high working field intensity, small dissipation factor. The compatibility with a variety of capacitor impregnation oil is good and it is easy to roll.									
应用范围 Application	主要应用于膜纸复合浸油介质或全膜浸油介质电容器，如输变电系统的无功补偿、均压、滤波、耦合等中高压电力电容器、电容式互感器制造等。 It is mainly used in film paper compound oil-impregnated media capacitor full film oil-impregnated media capacitor, such as middle and high voltage electric power capacitor, capacitance type transformer for reactive power compensation, pressure equalizing, filtering,, coupling of power transmission and transformation system.									
薄膜尺寸规格 Size specification for BOPP Film	规格 Size		10.0	11.0	12.0	13.0	14.0	15.0	16.0	18.0
	厚度 Thickness (μm)	机械法 MMV	10.0	11.0	12.0	13.0	14.0	15.0	16.0	18.0
		重量法 WMV	9.2	10.2	11.0	11.9	12.9	13.6	14.6	16.5
	注：特殊规格另行协商									
	Note: Special specifications will be discussed separately									
	平均厚度偏差（WMV） Average Thickness Deviation(WMV)			±2%						
成品膜卷宽度（mm） Width of finished film roll			(40—1200) ± 2 或根据客户需求进行分切 (40—1200) ± 2 or customized cutting according to client specifications.							
厚度表示方法	薄膜厚度的标称值用薄膜厚度中心值（整数，如 3、7、10、15...）加尾数(小数点后一位)表示。本公司 MPP 膜厚度标称值为重量法厚度(WMV)；RPP/RRPP 膜厚度的标称值为机械法厚度（MMV）(十层法)。									

Representation method of thickness	The nominal value of the film thickness is indicated by the central value (integer value, such as 3, 7, 10, 15.) of film thickness plus mantissa (one point after decimal point). Our nominal value for MPP film thickness refers to WMV, the nominal value for RPP/RRPP film thickness refers to MMV(ten layer method).
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2、技术特征（典型值） Technical features (typical value)

项目 Item		单位 Unit	粗化膜（非电晕处理）
密度 Density		g/cm ³	0.905 ± 0.005
熔点 Melting Point			170 ± 2
拉伸强度 Tensile Strength	纵向 MD	MPa	150
	横向 TD	MPa	300
断裂伸长率 Elongation at break	纵向 TM	%	140
	横向 TD	%	50
弹性模量 Elastic Modulus	纵向 MD	MPa	1600
	横向 TD	MPa	3000
空隙率 Space Factor(SF)	平均值 Average	%	9.0 ± 3.0
热收缩率 Thermal Shrinkage	纵向 MD	%	3.0
	横向 TD	%	0.8
表面粗糙度 Surface Roughness	RRPP	μm	0.35 ± 0.15
	RPP	μm	0.25 ± 0.15
介电强度（平均值） BDV(DC) (Average)		V/μm	550
电弱点 Electric weak point	300Vdc/μm	个/m ²	≤ 0.08
相对介电常数 Relative Permittivity		/	2.2 ± 0.1
体积电阻率 Volume Resistivity		Ω.m	≥ 1.0 × 10 ¹⁵
介电损耗因素 Dielectric Dissipation Fator		/	≤ 2.0 × 10 ⁻⁴
宽度极限偏差 Width limit deviation		mm	0/+1.0

◆ 项目测试标准依据 GB/T 13542.2-2021 The project testing standards are established in accordance with GB/T 13542.2-2021.

◆ 以上参数非技术协议，仅供参考 The above parameters are non-technical agreement, for reference only.

3、包装与储存 Packing and Storage

包装 Packing	每一卷薄膜在分切和检验之后都会用聚丙烯塑料袋进行包裹，以便隔离粉尘和颗粒。膜卷两端使用泡沫垫片、支撑隔板、堵头进行固定，膜卷竖立码放两层，并用纸箱包装、打包、托盘堆垛。堆垛好纸箱缠绕上塑料薄膜，以再次隔绝粉尘、颗粒和水汽。 Each roll of film is encapsulated in a polypropylene plastic bag following the slitting and inspection processes to ensure isolation from dust and particulate matter. The roll ends are secured using foam spacers, support partitions, and end caps. The rolls are then vertically stacked in two layers, packaged in cartons, and palletized. The palletized cartons are subsequently wrapped with plastic film to provide an additional barrier against dust, particulates, and moisture.	
标签 Labelling	每一卷膜在包装箱里面和包装箱上都有一张有关膜卷基本信息的标签。 Each roll is equipped with two labels, which are placed on the outer surface of the carton packaging and inside the packaging.	
储存 Storage	膜卷在储存过程中应该避免任何形式的震动；储存环境应该保持干燥和阴凉，环境温度不应高于 30℃；并且膜卷不宜储存太长时间，否则会影响薄膜的使用性能；建议储存时间不超过 1 年，如储存时间超过 1 年，应该对膜卷的各项性能重新进行评估。 All kinds of vibration and shocks should be avoided to the film rolls in the process of storage and transportation. The rolls should be stored not more than one year in a dry place. Temperature exceeding 30℃ should be avoided during transport and storage. If the film is storage for more than one year , the film properties should be evaluated again.	
	RRPP	代表薄膜的类型 The type of the rough film, where
	C	代表原料型号 Representative Material Model Number
	13.0μm	代表标称厚度（MMV）Nominal thickness of the film (MMV)
	318mm	代表膜卷的宽度 The width of film roll
	154511250	代表膜卷批号 complete customer roll number
	20260511	代表生产日期是 2026 年 5 月 11 日 the date of production is 2026-05-11
	1545	代表大膜卷编号 Production lot number
	112	代表小膜卷分切的号位 Roll position (i.e. position in TD direction in a slitting set)
	5	代表生产线是第五条生产线 The No.5 production line
	接头	0 代表无接头 The film has no splice

	优等品	代表该膜卷的等级 The class of the film roll (F/Q)
	3500m	代表膜卷的长度 The length of film roll (m)
	76mm	代表纸卷芯内径为 76mm The internal diameter of the core
	576.000kg	代表包含该膜卷在内的整箱膜卷的重量(kg) Total net weight of all films in the container