



High Breakdown
Voltage



High Dielectric
Strength

COSMO SUPER

Capacitor Grade

Metallized Polypropylene Films



Special Film Profile &
Metallization



Excellent Self-Healing
Properties

About Cosmo Films

Cosmo Capacitor Films, a division of Cosmo Films under the umbrella of Cosmo First Limited, is a renowned player in the capacitor industry based in Delhi, India. With a rich legacy spanning over 42 years, we specialize in producing BOPP-based films and manufacturing high-quality capacitor films.

Our manufacturing facility boasts an expansive carpet area, showcasing the undeniable prowess of Cosmo Capacitor Films in terms of production capacity. We take pride in our advanced technology and a skilled workforce dedicated to various core functions such as manufacturing, quality control, production, inspection, procurement, marketing, and servicing. This collective expertise positions us as an excellent force capable of delivering high-capacity metallized films to meet the evolving needs of the capacitor industry.

As a global player, we extend our reach to export markets worldwide, underscoring our commitment to excellence in R&D, manufacturing, and testing facilities. Cosmo Capacitor Films is sure to emerge as a market leader, setting new benchmarks in capacitor films.

Features

Our MPP films boast high dielectric strength, perfect for diverse capacitor uses. They excel in self-healing, reducing failure risks and extending lifespan. With options for film thickness and reel width customization, we ensure tailored performance. Additionally, we provide a range of film profiles and metallization options, including Standard, Slope/Ramp, Segmented, Series, and Pure Aluminium

- High dielectric strength
- Excellent self-healing properties
- Special film profile & metallization
- Various ranges of film thickness and customizable reel width

Applications

- Power electronics
- Motor runs and starts
- Fan Application
- Lighting Application
- Power Factor correction
- Energy storage systems

Industries We Serve



Railway Industry



Space & Aviation
Industry



Medical Industry



Automotive Industry



Wind Mill Application



Consumer Electronics/
Home Appliances

Our Latest Technology Metallization & Slitting Machine

Metallization Machine

World's Latest technology advance metallisation machine for film metallisation



Our metallizer is designed with a substantial capacity of 900 metric tons per year. Additionally, we are diligently preparing for the forthcoming launch of our second metallizer, a testament to our commitment to advancing technological capabilities in film production.

Micro Slitting Machine

Advanced technology micro slitting machine



COSMO is equipped with two advanced Slitting Lines, and two more are in the final planning phase, and are installed in Class 10,000 Clean Rooms, where temperature and humidity are carefully controlled. COSMO specializes in both Wave Cut and Straight Cut technology, and can handle reel widths ranging from 8.5mm to 150mm

General Specification for Capacitor grade MPP Film:

The base BOPP i.e. biaxially oriented plastic film produced using isotactic polypropylene without any plasticizers and metallized with Zn/AL or AL is suitable for the production of capacitors.

The selection of the base film is based on the customer's requirements and the capacitor application, such as High-temperature (HT) and Normal temperature (NT)

Thickness	Tolerance	Width	Free Margin	Roll Outer Diameter	Roll Outer Diameter
2.5	2.3 - 2.8	21mm / 25mm/30mm / 37.5mm Tolerance +/-0.3mm 50mm/60mm /62.5mm/ 75mm/100mm Tolerance +/-0.4mm *Other ratings available on special request	.5mm/ 2.0mm Tolerance +/-0.3mm 2.5mm Tolerance +/-0.4mm 3.0mm/ 4.0mm Tolerance +/-0.5mm *Other ratings available on special request	180mm / 240mm/ 260mm/ 280mm/ 300mm/ 330mm Tolerance +5/-20mm *Other ratings available on special request	Plastic Material Inner Diameter 76+ 1.0mm Wall Thickness 5mmt to 7mm Width Tolerance Width + 0.2mm
3.0	2.8 - 3.3				
2.5	2.3 - 2.8				
4.0	3.8 - 4.3				
4.5	4.3 - 4.8				
5.0	4.8 - 5.3				
5.5	5.3 - 5.8				
6.0	5.8 - 6.3				
6.5	6.3 - 6.8				
7.0	6.8 - 7.3				
7.5	7.3 - 7.8				
8.0	7.8 - 8.3				
9.0	8.8 - 9.3				
10.0	9.8 - 10.3				
11.0	10.8 - 11.3				
12.0	11.8 - 12.3				

Various Slitting Methods:

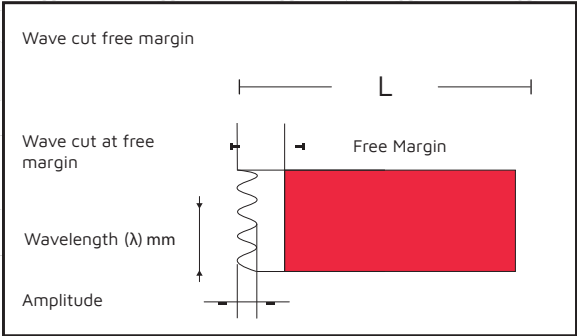
Straight Cut on Free Margin & Heavy Edge

Slitting width Range: Minimum 8.5mm to Maximum 150mm reel width



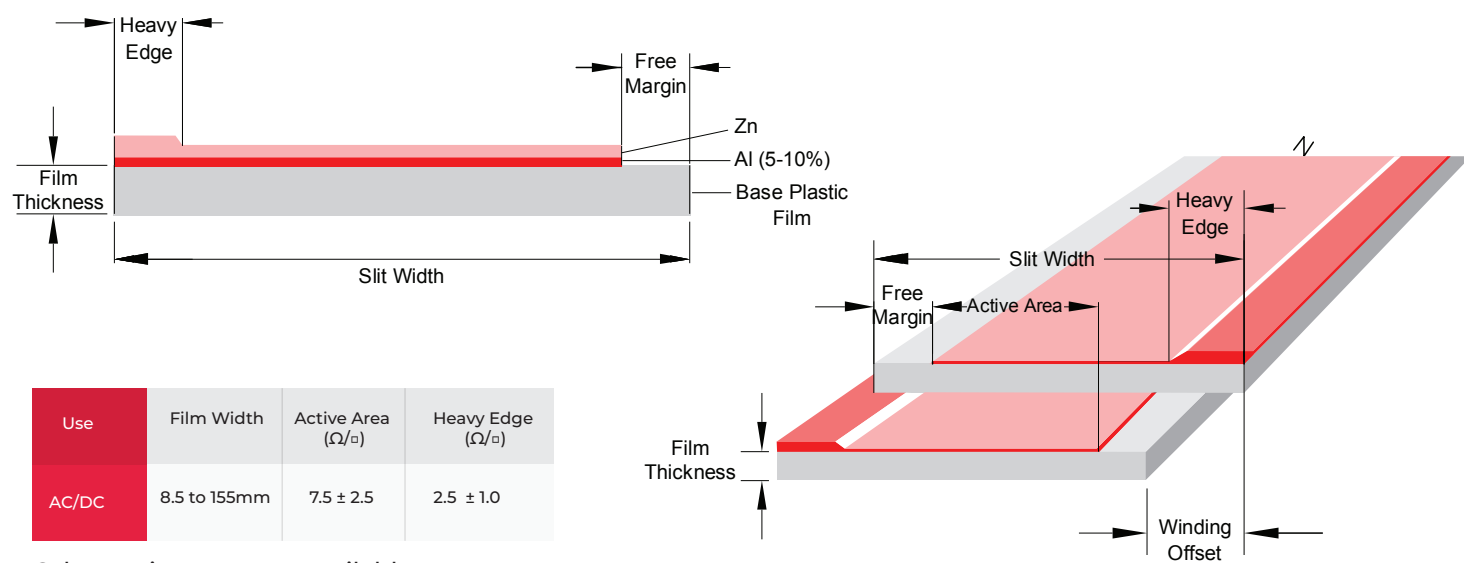
Wave Cut on Free Margin & Straight Cut on Heavy Edge

Wave Amplitude 0.8 + 0.1mm, Wavelength 5.0 + 1.0mm



AL-Zn STANDARD METALLIZED POLYPROPYLENE FILM

Standard Resistance



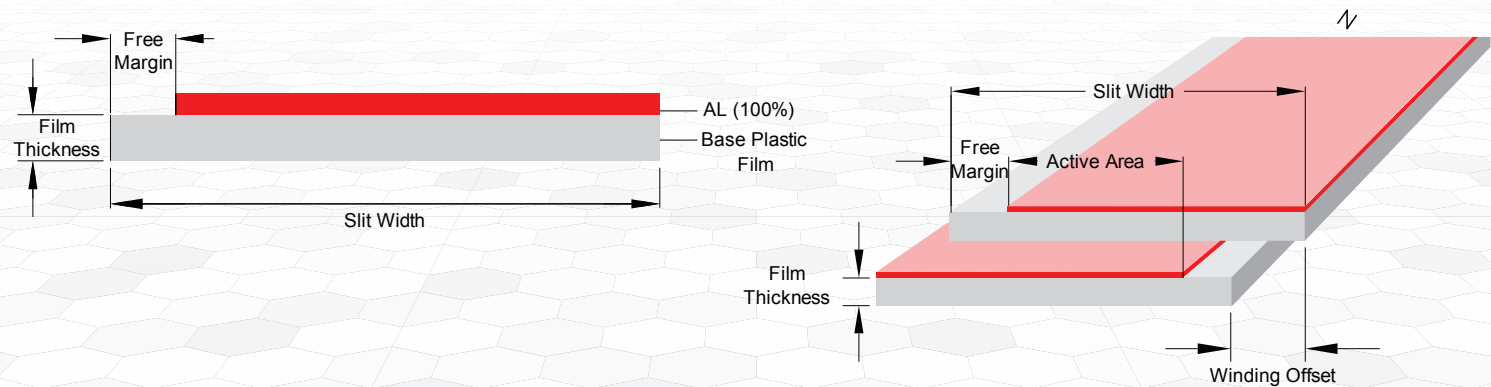
Other resistances are available on request

Application

Fan Capacitors, Motor Run/Start Capacitors; Washing Machine Capacitors, Air Conditioning Capacitors

PURE AL METALLIZED POLYPROPYLENE FILM

Standard Resistance



Use	Film Width	Active Area ($\Omega/\square$)
AC/DC	25 to 125mm	3.0 \$ 1.0

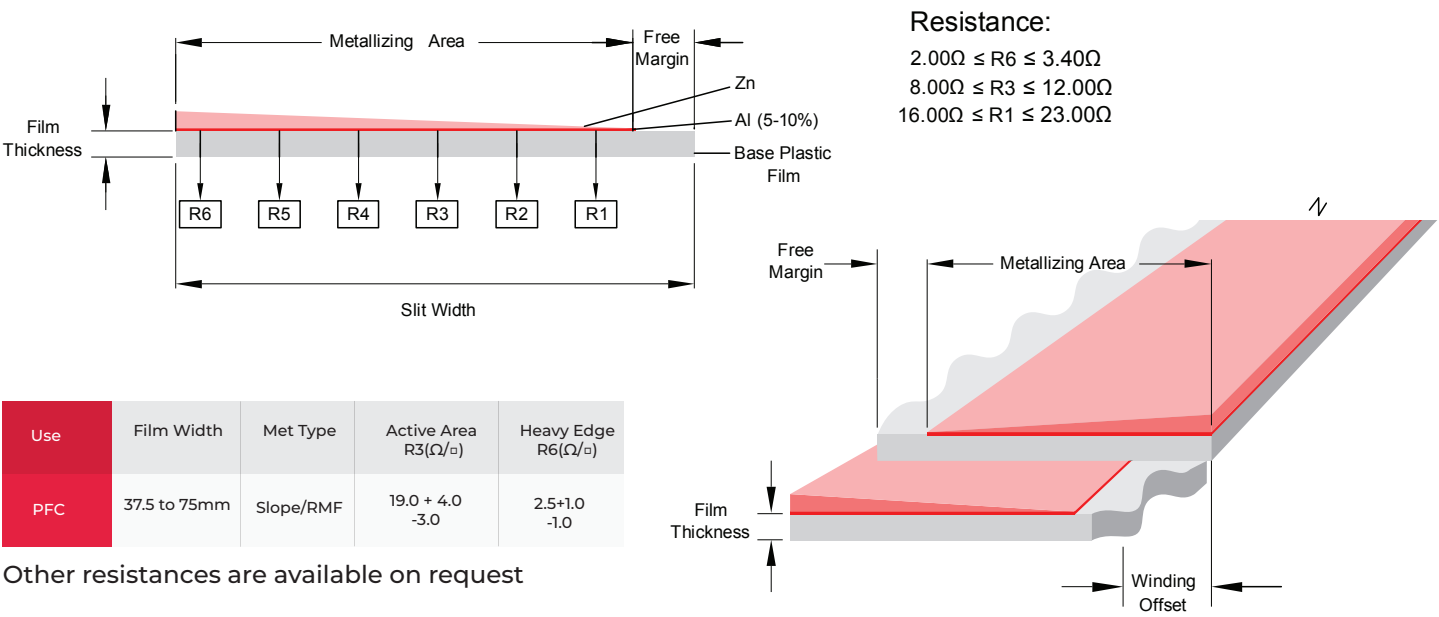
Other resistances are available on request

Application

Lighting Capacitors

AL-Zn SLOPE/RMF METALLIZED POLYPROPYLENE FILM

Standard Resistance

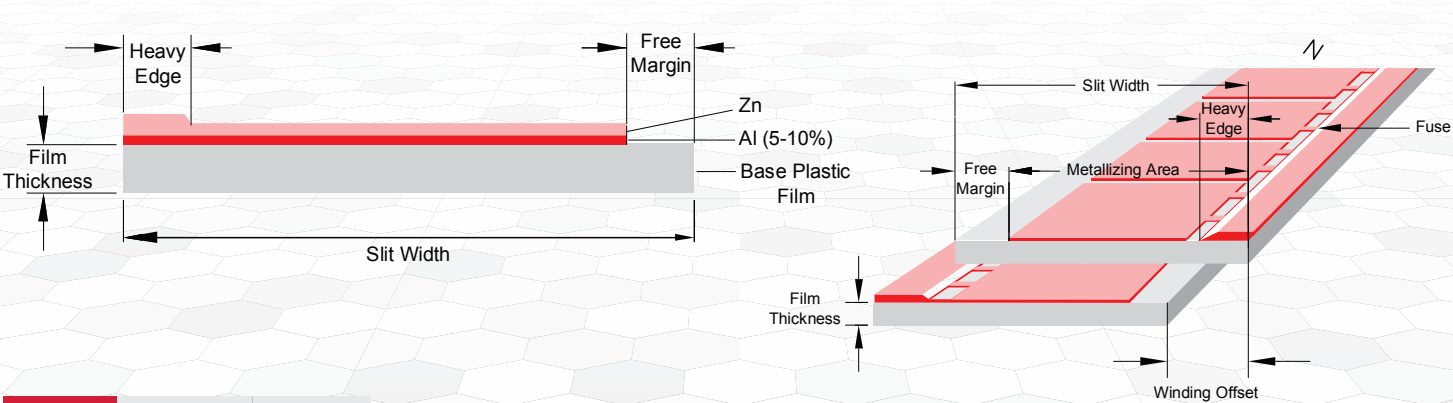


Application

PFC Capacitors (Cylindrical & Box Type)

AL-Zn SEGMENTED METALLIZED POLYPROPYLENE FILM

Standard Resistance



Use	Active Area	Heavy Edge
AC/DC	$10 \pm 3.00/\Omega$	$\leq 3.0\Omega$

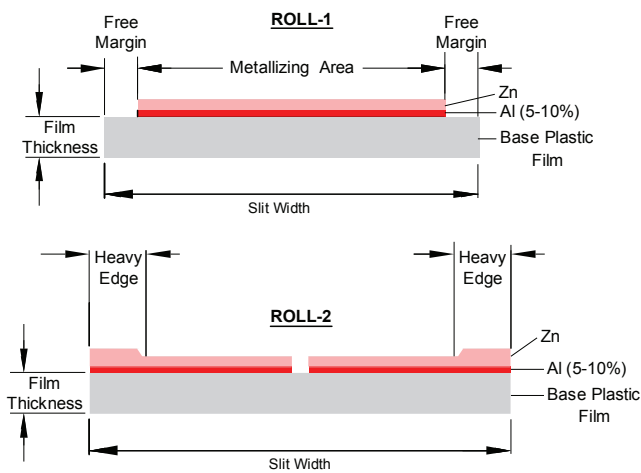
Other resistances are available on request

Application

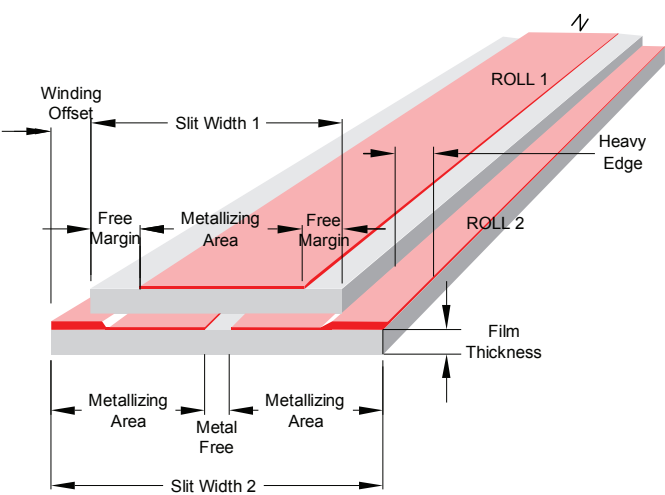
DC Link Capacitors

Al-Zn SERIES METALLIZED POLYPROPYLENE FILM

Standard Resistance



To protect the winding off-set roll1 should be smaller than roll2



Special dimensions are available by prior mutual agreement

Other resistances are available on request

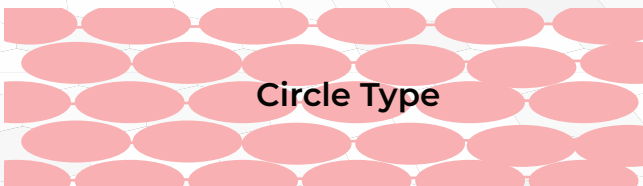
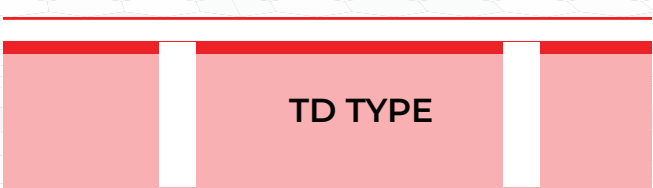
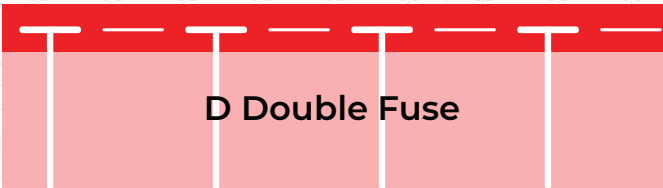
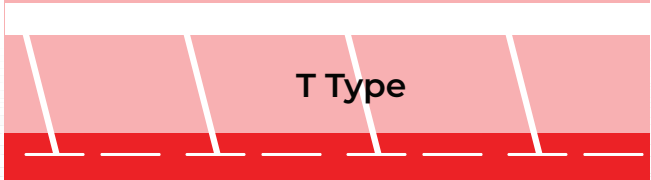
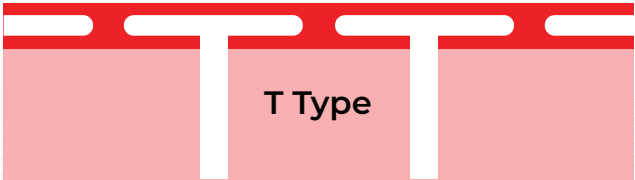
Application

PFC Capacitors (Cylindrical & Box Type)

Use	Type
AC	Lighting-HV
PFC	Heavy Duty

Segment Profile Pattern

COSMO offers various segment film profile to reduce leakage current, improve breakdown voltage, capacity loss, safety function, and inductance reduction



Quality Assurance Testing Facilities & Equipment's

Mechanical Inspection

- Reel Width
- Film Free Margin
- Amplitude and Wavelength
- Reel roughness & wobble Test
- Outer Diameter of Reel and Inner Diameter of Core
- Thickness of BOPP and MPP Film by Micrometer (Micrometer)

Test	Instrument	Range	Least count	Specification
Reel Width	Vernier caliper	0 to 200 mm	0.01 mm	$\pm 0.2 \text{ mm} \pm 0.3 \text{ mm}$
Film Free Margin	Profile Projector / Eye Glass (10 X)	0 to 1000 mm 0 to 20mm	0.001 mm 0.01 mm	$1.0 \pm 0.3\text{mm}$ $1.5 \pm 0.3\text{mm}$ $2.0 \pm 0.4\text{mm}$ $2.5 \pm 0.4\text{mm}$
Outer Diameter of Reel	Measuring Scale	0 to 500 mm	1.00 mm	0 to 330mm
Inner Diameter of Core	Go Gauge/ Vernier Caliper	74.58mm	NIL	Core 75mm (+1 / -0.5mm)
Thickness of BOPP and MPP Film by Micrometer & Weight measurement method	Micrometer	0 to 25 mm	0.001 mm	Thickness $\pm 5\%$
Reel roughness & wobble Test	Dial Gauge for Wobble Test Core Alignment wrt film – Core Pressing m/c	0 to 10 mm	0.01 mm	< 0.5mm

Electrical Inspection

- Active Area and Reinforced Edge Resistivity (Nagy Meter)
- Break Down Voltage Test of BOPP / MPP Film

Test	Instrument	Range	Reel Layers / Pairs
Active Area and Reinforced Edge Resistivity	Sheet Resistivity meter (Make: Nagy)	0 to 200 K/ Ω	Surface Resistivity 5 to 10 Ω - STD Met Surface Resistivity 16 to 30 Ω - RMF Met Reinforced Edge Resistivity < 3.0 Ω
Break Down Voltage Test of BOPP and MPP Film	BDV Tester	(0-10kV)	BDV shall be more than 300V DC /micron

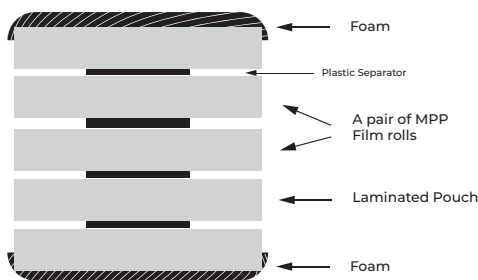
Visual Inspection

Inspection Type	Instrument	Parameter
Visual Inspection	1. Light table 2. Magnifying glass (10X) 3. Digital Microscope	Winding finish Wrinkles / Scratches Weak metallisation / White ring White dots / Dark free margin

Packaging, Handling and Storage

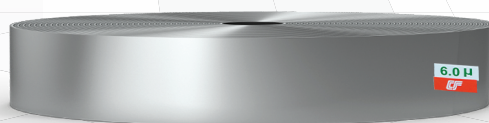
Packaging

- All materials are packaged in a cardboard box and plastic bag with activated desiccants, vacuum-sealed or similarly packaged, and resistant to humidity and waterproof to ensure quality and protect against external damage.
- Metallized film pairs are first placed into laminated bags. The bags are then vacuumed to remove any air and sealed securely.
- The vacuum-packed material is then packed into a corrugated primary (inner) box and labelled for identification.
- For Domestic orders, the primary (inner) boxes are packed into the master (outer) box. Then the box is labelled, wrapped in LDPE film, and nylon strapped for shipment or as per customer request.
- For export orders, the inner boxes are finally packed onto a pallet and wrapped in LDPE film. Shipping marks are then pasted onto each pallet before dispatch.



Identification

- A colour sticker must be affixed to the reels to identify the film's direction.
- The left-side reels should be identified with a red sticker, while the right-side reels should be identified with a green sticker or as per customer requirement.
- A pair is formed by the right-side reel and the left-side reel together.



- Each vacuum-sealed pack and corrugated packing are labeled with the following minimum information:

- Each vacuum-sealed pack and corrugated packing are labelled with the following minimum information:

CAPACITOR METALLISED FILM	
Material Desc:	Prod. Date:
Customer Order No:	Free Margin:
Bag No.:	Reel Dia:
Net Wt:	Met Type:
Thickness:	Base Film:
Width:	Packed By:
No. of Reels:	
ISO 9001 COMPANY Expiry Date : 180 days from Production RoHS Compatible	

In case the customer specifies any special identification, the same shall be followed for the particular customer



Handling

- Reels shall be stacked below the specified layers per the customer purchase order
- Specially designed PU foam washers/spacers shall be used between the reels to avoid damaging the film surface
- The film surface shall be protected against sharp edges & impact
- Vacuum-packed bags with corrugated packing shall be handled safely to avoid damage

Film Width	≥ 100 mm	75 mm	50/55 mm	<37.5/ 30 mm
Reel Layers / Pairs	2 layers (1 pairs)	4 layers (2 pairs)	6 layers (3 pairs)	8 layers (4 pairs)

Storage

- High dielectric strength
- Excellent self-healing properties
- Special film profile & metallization
- Various ranges of film thickness and customizable reel width

About Us

Cosmo Films is a global leader in specialty films for packaging, lamination, labelling and synthetic paper. With engineering of innovative products and sustainability solutions, Cosmo Films over the years has been partnering with worlds' leading F&B and personal care brands and packaging & printing converters to enhance the end consumer experience. With state-of-the-art manufacturing facilities in India and Distribution, warehousing & sales offices in different parts of the world, the company has been at the forefront of developing customer-centric solutions to deliver the finest product and service experience, backed by innovation, people, and processes.

Installed Production Capacity

BOPP Films: 1,96,000 TPA
CSP: 7,200 TPA
CPP Films: 27,000 TPA
BOPET Films: 30,000 TPA
PET G Films: 14,000 TPA
Thermal Films: 40,000 TPA
Coating Films: 30,000 TPA
Metalized Films: 41,000 TPA
Capacitor Films: 1000 TPA

Infrastructure**

9 BOPP Production Lines*
1 CSP Line
3 CPP Lines
1 BOPET Line
6 Thermal Lamination Lines
8 Gravure Coating Lines
8 Metalizers

Certifications

ISO 9001: 2015 - Quality Management System
BRCGS - Global Standard For Packaging Material System
ISO 14001: 2015 - Environment Management System
FSSC 22000 - Food Safety System Certification
ISCC PLUS - International Sustainability and Carbon Certification

* 10th BOPP line to be commissioned by March, 2025

* 10th BOPP line to be commissioned by 2025



CORPORATE OFFICE
Delhi



MANUFACTURING FACILITIES
India : 3



SALES OFFICES
India: 6 | US | Germany |
Korea | Japan



CUSTOMER FOOTPRINTS
100 Countries



WAREHOUSES
Canada: 1 | US: 7 | Korea: 1 |
Japan: 1 | Germany: 2 | Mexico: 1

Corporate Office

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COSMO FILMS
Engineered to Enhance

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