Polypropylene Film Metallized with Aluminum

Polypropylene film metallised with aluminium provides gas?moisture barrier improvement, reflectivity, conductivity, and flexibility for capacitor sheets, EMI panels, reflective insulation, and research on hybrid barrier materials and optical layer performance. **SKU:** 1000089628-group
Product Code: PP30-MZ-000180

Material Properties for Polymers

Chemical Resistance

Element	Value
Acids - concentrated	Good-Fair
Acids - dilute	Good-Fair
Alcohols	Good
Alkalis	Good
Aromatic hydrocarbons	Fair
Greases and Oils	Good-Fair
Halogenated Hydrocarbons	Good-Poor
Halogens	Poor
Ketones	Good

Mechanical Properties

Element	Value
Coefficient of friction	0.1-0.3
Hardness - Rockwell	R80-100
Elongation at break(%)	150-300, for biax film >50
Tensile modulus(GPa)	0.9-1.5, for biax film 2.2-4.2
Izod impact strength(J m?¹)	20-100
Abrasive resistance - ASTM D1044(mg/1000 cycles)	13-16
Tensile strength(MPa)	25-40, for biax film 130-300,

Electrical Properties

Element	Value
Dielectric constant @1MHz	2.2-2.6

Element	Value
Dissipation factor @ 1MHz	0.0003-0.0005
Dielectric strength(kV mm?¹)	30-40
Surface resistivity(Ohm/sq)	10^{13}
Volume resistivity(Ohmcm)	10^{1}?-10^{1}?

Physical Properties

Element	Value
Flammability	HB
Radiation resistance	Fair
Refractive index	1.49
Resistance to Ultra-violet	Poor
Limiting oxygen index(%)	18
Water absorption - equilibrium(%)	0.03
Density(gcm?³)	0.9

Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa(C)	100-105
Heat-deflection temperature - 1.8MPa(C)	60-65
Lower working temperature(C)	50
Upper working temperature(C)	90-120
Specific heat(J K?¹ kg?¹)	1700-1900
Thermal conductivity(W m?¹ K?¹)	0.1-0.22@23°C
Coefficient of thermal expansion(x10?? K?¹)	100-180