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Partnering Global Trade
HPS EXIM PRIVATE LIMITED

POLYESTER FILMS : ER GRADE

TECHNICAL DATA													
PROPERTIES	UNITS	ASTM # / TEST METHOD	ER/ERE										
GENERAL DATA													
Thickness	mic	GPL	12	19	23	36	50	75	100	125	190	250	350
Yield	m^2	GPL	59.5	37.5	31	19	14.3	9.5	7.14	5.71	3.76	2.86	2.04
Density	gm/cc	ASTM-D-1505	1.4										
Water Absorption (MAX)	%	ASTM-D-570	0.8										
Service Temperature	Deg C	GPL	-70 to 150										
Oligomer Extraction	%	GPL	NA										
MECHANICAL DATE													
Tensile Strength	-												
MD	Kg/cm^2	ASTM-D-882	2000	2000	2000	2000	2000	1900	1900	1900	1900	1600	1500
TD	Kg/cm^2	ASTM-D-882	2000	2000	2000	2000	2000	1900	1900	1900	1900	1600	1500
Elongation													
MD	%	ASTM-D-882	120	120	120	140	140	140	140	140	160	170	170
TD	%	ASTM-D-882	100	100	100	130	130	130	140	140	160	170	170
COF-Static (One Side to Other)	-	ASTM-D-1894	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OPTICAL DATE													
HAZE	%	ASTM-D-1003	4.0	4.0	5.0	8.0	10.0	10.0	10.0	10.0	20.0	25.0	30.0
THERMAL DATA													
Shrinkage @ 150 Deg C for 30 mins	%												
MD	%	ASTM-D-1204	2.0	2.0	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.0	1.0
TD	%	ASTM-D-1204	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Shrinkage @ 190 Deg C for 5 mins													
MD	%	ASTM-D-1204	NA										
TD	%	ASTM-D-1204	NA										
Melting Point	Deg C	DSC	250										
Coefficient of thermal expansion between													
20 Deg C	1/K (cm/cm Deg C)		36×10^{-6} (MD)										
50 Deg C	1/K (cm/cm Deg C)		36×10^{-6} (MD)										
Specific Heat @ 25 Deg C	Cal/gm Deg C		NA										
ELECTRICAL DATA													
Break down Voltage in air (2" Electrode)	KV	ASTM-D-149	3.5	4.5	5.5	7.5	9.5	12.5	13.5	15.5	18.5	19.5	22.5
Surface Resistivity	ohm	ASTM-D-257	10.12										
Volume Resistivity	ohm/m	ASTM-D-257	10.16										
Die Electric Resistivity		ASTM-D-150	NA										
Permitivity		IEC 250											
23 Deg C, 50 Hz			3.26										
23 Deg C, 1kHz			3.24										
23 Deg C, 10kHz			3.21										
0 Deg C, 50 Hz			3.26										
50 Deg C, 50 Hz			3.27										
100 Deg C, 50 Hz			3.35										
150 Deg C, 50 Hz			3.65										
Dissipation Factor		IEC 250											
23 Deg C, 50 Hz			0.002										
23 Deg C, 1kHz			0.0055										
23 Deg c , 10kHz			0.011										
0 Deg C, 50 Hz			0.004										
50 Deg C, 50 Hz			0.0015										
100 Deg C, 50 Hz			0.007										
150 Deg C, 50 Hz			0.006										
CHEMICAL RESISTANCE													
Dilute Acids & Alkalis			Good										
Concentrated Alkalis			Poor										
Concentrated Hydrochloric Acid			Fair										
Concentrated Sulphuric Acid			Poor										
Grease, Oils and Fats			Good										
Organic Solvents, Alcohol & Hydrocarbons			Good										
Ketones, Esters and Chlorinated compounds			Fairly Good										
Phenols, Cresols & Chlorinated phenols			Poor										