

# CS Hyde Company

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## PRODUCT INFORMATION

### 33-\_F TPX/PMP Film DX845 Resin

Physical Properties		High- Modulus DX845 TPX®				
	List	Method Condition	Unit	Method	DX845	
Basic Properties	Density	Density Gradient Method	kg/m <sup>3</sup> lb/in <sup>3</sup>	MCI Method	833 0.030	
	MFR	Applied Force= 5kgf, 260°C	g/10min	MCI Method	9	
	Melting Point	DSC Method	°C °F	ASTM-D3418	232 449.6	
	Water Absorption		%	ASTM-D570	<0.01	
Thermal Properties	Vicat Softening Temperature	Injection Molded Specimen (2mm thick x 2pcs) Heat speed: 50°C/ hour Applied Load: 10N	°C °F	ASTM-D1525	168 334.4	
	Heat Distortion Temperature	Injection Molded Specimen (1/4 inch thick) Heat Speed: 120°C/hour Applied Stress: 0.45MPa	°C °F	ASTM-D648	127 260.6	
	Coefficient of Linear Expansion	TMA Method Measured Range: -10°C – 160°C Applied Force: 3g Nitrogen Flow: 100mL/min	cm/cm°C	MCI Method	1.17x10 <sup>-4</sup>	
Mechanical Properties	23°C 73°F	Yield Stress	Injection Molded Specimen (ASTM-4)	MPa PSI	ASTM-D638	30 4350
		Fractured Stress	Cross-Head Speed: 50mm/min	MPa PSI	ASTM-D638	25 3625
		Fractured Strain	Chuck Distance: 65mm	%	ASTM-D638	19
		Tensile Modulus		MPa PSI	ASTM-D638	1900 275500
	23°C 73°F	Flexural Modulus	Injection Molded Specimen (3.2mm Thick)	MPa PSI	ASTM-D790	1500 217500
		Flexural Strength	Cross-Head Speed: 1.3mm/min Span Length: 51mm	MPa PSI	ASTM-D790	40 5800
	23°C 73°F	Izod Impact Strength	Injection Molded Specimen (Machined Notch)	J/m ft-lbs/in <sup>2</sup>	ASTM-D256	25 0.47
			Injection Molded Specimen (w/o Notch)	KJ/m <sup>2</sup> ft-lbs/in <sup>2</sup>	ASTM-4812	10 4.8
23°C 73°F	Rockwell Hardness	Injection Molded Specimen R Scale	-	ASTM-D785	86	

\*The above values are "Typical Values" which have a nominal range about them and are not intended for specification purposes.

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<b>Optical Properties</b>	Haze	Injection Molded Specimen C illuminant	%	ASTM- D1003	0.7
	Transmittance	Injection Molded Specimen (2mm thick)	%	ASTM-D1003	94
	Refractive Index		-	ASTM- D542	1,462
<b>Electrical Properties</b>	Volume Resistivity	Injection Molded Specimen (2mm Thick)	$\Omega \cdot \text{cm}$	ASTM- D257	$>10^{16}$
	Dielectric Breakdown Voltage	Injection Molded Specimen (2mm Thick)	Kv/mm V/mil	ASTM-D149	32 812
	Relative Dielectric Constant	Injection Molded Specimen (2mm Thick) Frequency: 1MHz	-	ASTM-D150	2.11
<b>Moldability</b>	Spiral Flow	Injection Temperature: 310- 320°C Mold Temperature: 73°C	cm	MCI Method-1	50
	Mold Shrinkage	Injection Molded Specimen (2mm Thick) MD	%	MCI Method-2	1.5
		Injection Molded Specimen (2mm thick) TD	%	MCI Method-2	1.4

MCI Method-1 Molding Temp. : 310~330°C (grade dependent)

MCI Method-2 Molding Temp. : 260~280°C (grade dependent)

TPX® is a registered trademark of Mitsui Chemicals, Inc

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