

# TYPICAL PROPERTIES DATA SHEET

Hony Engineering Plastics Limited

## HONYPLAS® Polyimide Properties Data Sheet

### ① Raw material description

<b>Standard Grade:</b>	Extrusion grade	<b>Appearance color:</b>	---
<b>Applications:</b>	Processing material,rod, sheet. Used for high-tec precision parts, electronic and semiconductor, aircraft components, compressor impeller, bearing lantern ring, Jet engines for combustion system components.		
<b>Remarks:</b>	Charatcor: High hardness, high insulation, radiation resistance, corrosion resistance, wear resistance and friction properties, uvioresistant, self-lubricating, small coefficient of thermal expansion, inherent low flammability.		

### ② Raw material technical datasheet

Property item	Test conditions	Testing method	Testing data	Unit
<b>I. Physical property</b>				
Density	23°C	ASTM D792	1.43	g/cm <sup>3</sup>
Shrinkage	---	ASTM D955	0.5~1	%
Absorption	---	ASTM D570	0.3	%
Flammability class	---	UL94	non-ignitable	---
<b>II .Mechanical property</b>				
Tensile strength	---	ASTM D638	90	MPa
Elongation at break	---	ASTM D638	6~8	%
Flexural Strength	---	ASTM D790	98	MPa
Compression strength	---	ASTM D790	166	MPa
Hardness-Rockwell	---	ASTM D785	199	M (Scale)
Impact Strength	---	ASTM D256	53	KJ/m <sup>2</sup>
Impact Strength(notched)	23°C	ASTM D256	4	KJ/m <sup>2</sup>
Coefficient of friction	---	ASTM D1894	0.35	---
<b>III. Thermal property</b>				
Thermal deformation temperature	1.82MPa	ASTM D648	360	°C
Max. working temperature(short time)	---	UL746B	360	°C
Max. working temperature(long time)	---	UL746B	260	°C
Brittle temperature	---	ASTM D746	>-269	°C
Thermal conductivity	23°C	ASTM C177	0.32	W/(m*K)
Coefficient of linear thermal expansion	---	ASTM D696	1~5	10 <sup>-5</sup> K <sup>-1</sup>
<b>IV. Electrical property</b>				
Dielectric constant	---	IEC 60250	3.4	10 <sup>3</sup> Hz
Dielectric loss angle tangent	---	IEC 60250	>1	10 <sup>3</sup> Hz
Dielectric strength	---	IEC 60243	110~120	kV/mm
Volume resistivity	---	IEC 60093	10 <sup>17</sup>	Ω * cm
Surface resistivity	---	IEC 60093	10 <sup>14</sup>	Ω
Electric arc resistance	---	IEC 61621	230	sec
NOTE: 1 g/cm <sup>3</sup> = 1,000 kg/m <sup>3</sup> , 1 Mpa = 1 N/mm <sup>2</sup> , 1kV/mm = 1 MV/m				