

## POLIMAXX U521

IRPC Public Company Limited - *Ultra High Molecular Weight Polyethylene*

### General Information

#### Product Description

U521 is an Ultra High Molecular Weight Polyethylene with corrosion stabilizer (CS) in powder form with an average molecular weight about 5.5 Million g/mol. The extremely high molecular weight yields several unique properties including high abrasion resistance, impact strength and low coefficient of friction.

#### General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Additive	• Unspecified Additive		
Features	• Abrasion Resistant	• Low Friction	
	• Good Impact Resistance	• Ultra High Molecular Weight	
Forms	• Powder		

### Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density	0.930	g/cm <sup>3</sup>	ISO 1183
Apparent (Bulk) Density	> 0.40	g/cm <sup>3</sup>	ISO 60
Intrinsic Viscosity	23	dl/g	ISO 1628-3
Average Molecular Weight	5500000	g/mol	Internal Method
Average Particle Size - X50 <sup>2</sup>	9.4	mil	
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	3190	psi	ISO 527-2
Tensile Stress (Break)	5080	psi	ISO 527-2
Tensile Strain (Break)	> 300	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	No Break		ASTM D256
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	63		ISO 868
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	257 to 262	°F	ISO 306
Peak Melting Temperature <sup>3</sup>	266 to 275	°F	ASTM D3418

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Laser Scattering

<sup>3</sup> 10°C/min

