



**Engineering
Plastics**

QUANDA

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Typical Properties Data Sheet

The Supplier of Engineering Plastics
Rods, Sheets, Tubes, Profiles and Machining Parts

Semolar®Antistatic UHMW-PE Technical Property Data sheet

①raw materials description				
Standard grade	Extrusion grade	Appearance color:	---	
Application:	Processing wood , plate, strip, tube, used in machinery, instrumentation, automotive parts, electrical and electronics, railways, household appliances, telecommunications, textile machinery, petrol tubing and precision engineering products.			
Characteristics	Excellent wear resistance, self-lubricating, high mechanical strength.			
②raw materials technical data				
Property item	Test conditions (status)	Test method	Test data	Unit
I.Physical properties				
Density	---	ASTM D792	0.93	g/cm3
Shrinkage	---	ASTM D955	2~3	%
Water absorption	24 hours dipping (23°C)	ASTM D570	<0.01	%
Flammability class	---	UL94	HB	Class
II .Mechanical properties				
Impact strength(innotched)	---	ASTM D256	破坏不了	kJ/m2
Impact strength(notched)	---	ASTM D256	> 100	kJ/m2
Tensile strength	---	ASTM D638	28	MPa
Tensile coefficient	---	ASTM D638	1083	MPa
Elongation at tensile	---	ASTM D638	140	%
Hardness-Rockwell	---	ASTM D785	40	R (Scale)
Hardness- Shore D	---	ASTM D2240	68	D
Charpy impact strength	---	ASTM D256	> 80	kJ/m2
IZOD impact strength(notched)	---	ASTM D256	NB	J/m2
Friction coefficient	---	ASTM D1894	0.12	-
Wear rate	---	ASTM D1044	0.58	%
III.The thermal properties				
Heat deflection temperature-HDT/A	0.46MPa	ASTM D648	85	°C
Max.working temperature-short time	---	UL746B	93	°C
Max.working temperature-long time	---	UL746B	82	°C
Melting point	---	ASTM D2133	136	°C
Brittle transition temperature	---	ASTM-D746	-137	°C
Thermal conductivity	23°C	ASTM C177	8.5	10-3 cal/cm·s·°C
Coefficient of linear thermal expansion	---	ASTM D696	6.5	10-4 /°C
IV.Electrical properties				

Dielectric constant	---	ASTM D150	2.3	10 ⁶ Hz
Dielectric dissipation factor	---	ASTM D150	1.9×10 ⁻⁴	10 ⁶ Hz
Dielectric strength	short time	ASTM D149	50	kV/mm
Volume resistivity	---	ASTM D257	10 ⁶ ~10 ⁹	(Ω) * cm
Surface resistivity	---	ASTM D257	10 ⁶ ~10 ⁹	(Ω)

NOTE: 1 g/cm³ = 1,000 kg/m³, 1 Mpa = 1 N/mm², 1kV/mm = 1 MV/m

STATEMENT:

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Quanda will not provide any legally binding guarantee of certain properties, or any suitability.