



**Engineering
Plastics**

QUANDA

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Typical Properties Data Sheet

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

Qunsail® POM-GF20% Properties Data Sheet

① Raw material description

Standard Grade:	Extrusion grade	Appearance color:	---
Application:	High stressed components, processing materials, sheet, board, strip, tube. Used in gears, bushes, cams, and other applications for abrasion resistance.		
Remarks:	Charactors: With ultra-low coefficient of friction and high wear rate resistance		

② Raw material technical datasheet

Property item	Test conditions	Testing method	Testing data	Unit
I. Physical property				
Density	23°C	ASTM D792	1.54	g/cm ³
Shrinkage	3.2mm	ASTM D955	1.9-2.2	%
Water absorption	24h dipping	ASTM D570	0.2	%
Flammability class	---	UL94	HB	Class
II. Mechanical property				
Tensile impact resistance strength	Long specimens 23°C	ASTM D1822	66	kJ/m ²
Tensile strength	23°C	ASTM D-638	48	MPa
	-55°C	ASTM D-638	74	MPa
Break point tensile strain	23°C	ASTM D-638	15	%
	-55°C	ASTM D-638	10	%
Load deformation	140kg/cm ² , 50°C	ASTM D-621	0.6	%
Flexural strength	23°C	ASTM D-790	72	MPa
Flexural modulus	23°C	ASTM D-638	2410	MPa
	-55°C	ASTM D-790	3730	MPa
Bending fatigue endurance limit	50%RH, 23°C, 10 ⁶ period	ASTM D-671	24	MPa
Hardness- Rockwell	---	ASTM D-785	78	M (Scale)
Hardness- Shore D	---	ASTM D-2240	83	D
Compressive stress	23°C, 1% defirmation	ASTM D-695	31	MPa
	23°C, 10% defirmation	ASTM D-695	90	MPa
Jane stent impact strength (No chipped)	23°C	ASTM D-256	37	J/m
Jane stent impact strength (chipped)	-40°C	ASTM D-256	32	J/m
III. Thermal property				
Thermal deformation temperature	1.8MPa	ASTM D-648	118	°C
Max. working temperature(short time)	---	UL746B	140	°C
Max. working temperature(long time)	---	UL746B	100	°C
Melting temperature	---	ASTM D-2133	175	°C
Thermal conductivity	23°C	ASTM C-177	0.23	W/(m*K)

Coefficient of linear thermal expansion	-40~29°C	ASTM D-696	10.4	10 ⁻⁵ m/m°C
	60~104°C	ASTM D-696	12.2	10 ⁻⁵ m/m°C
III. Thermal property				
Dielectric constant	50%RH,23°C,10 ² ~10 ⁶ Hz	ASTM D-150	3.1	Ω.cm
Dielectric loss angle tangent	50%RH,23°C,10 ⁶ Hz	ASTM D-150	0.009	---
Dielectric strength	instant Short time(2.3mm)	ASTM D-149	15.8	kv/mm
Volume resistivity	23°C,0.2% moisture content	ASTM D-257	10 ¹⁵	Ω.cm
Surface resistivity	---	ASTM D-257	10 ¹⁵	(Ω)
Electric arc resistance	3.1mm	ASTM D-495	183	sec
NOTE: 1 g/cm ³ = 1,000 kg/m ³ , 1 Mpa = 1 N/mm ² , 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.				