

## Recalon® PA66+GF30% Properties Data Sheet

### ① Raw material description

<b>Standard Grade:</b>	Extrusion grade	<b>Appearance color:</b>	---
<b>Applications:</b>	Processing material, sheet, strip, tube, used in machinery, instrument, automobile components, electronics, railway, household appliances, communication, frame, pipeline and other precision engineering.		
<b>Remarks:</b>	Character: With excellent abrasive resistance, self-lubricating, special heat stability, high mechanical strength.		

### ② Raw material technical datasheet

Property item	Test conditions	Testing method	Testing data	Unit
<b>I. Physical property</b>				
Density	23°C	ASTM D792	1.3~1.4	g/cm <sup>3</sup>
Shrinkage	---	ASTM D955	0.3~0.6	%
Absorption	24hr steeping (23°C)	ASTM D570	0.7	%
Flammability class	---	UL94	HB	Class
<b>II. Mechanical property</b>				
IZOD impact strength	23°C, DAM	ASTM D256	107	J/m
IZOD impact strength	23°C, 50%RH	ASTM D256	133	J/m
Tensile strength	23°C, DAM	ASTM D638	196.1	MPa
Tensile strength	23°C, 50%RH	ASTM D638	124.1	MPa
Shear strength	23°C	ASTM D732	>86	MPa
Elongation at break	23°C, DAM	ASTM D638	3	%
Elongation at break	23°C, 50%RH	ASTM D638	4	%
Flexural strength	23°C, DAM	ASTM D790	262	MPa
Flexural strength	23°C, DAM	ASTM D790	8963	MPa
Flexural strength	23°C, 50%RH	ASTM D790	6205	MPa
Hardness-Rockwell	---	ASTM D785	117	R (Scale)
Charpy impact strength (unnotched)	23°C	ASTM D6110	75	kJ/m <sup>2</sup>
Charpy impact strength (notched)	23°C	ASTM D6110	15	kJ/m <sup>2</sup>
Coefficient of friction	__3	ASTM D1894	<0.15	---
Coefficient of friction	__4	ASTM D1894	0.4	---
<b>III. Thermal property</b>				
Thermal deformation temperature	1.80MPa	ASTM D648	249	°C
Max. working temperature(long time)	---	UL746B	120	°C
Melting temperature	DAM	ASTM D789	255	°C
Brittle temperature	---	ASTM D746	-30	°C
Thermal conductivity	23°C	ASTM C177	0.4	W/(m*K)

Coefficient of linear thermal expansion	---	ASTM D696	$2.3 \times 10^{-5}$	m/m/°C
<b>IV. Electrical property</b>				
Dielectric constant	1 MHz	ASTM D150	4	$10^6$ Hz
Dielectric loss angle tangent	1 MHz	ASTM D150	0.02	$10^6$ Hz
Dielectric strength	3mm	ASTM D149	17-20	kV/mm
Volume resistivity	DAM	ASTM D257	$10^{15}$	$\Omega \cdot \text{cm}$
Volume resistivity	100%RH	ASTM D257	$10^{14}$	$\Omega \cdot \text{cm}$
Surface resistivity	---	ASTM D257	$10^{16}$	$\Omega$
Electric arc resistance	---	ASTM D495	114-120	sec

NOTE:  $1 \text{ g/cm}^3 = 1,000 \text{ kg/m}^3$ ,  $1 \text{ Mpa} = 1 \text{ N/mm}^2$ ,  $1 \text{ kV/mm} = 1 \text{ MV/m}$

**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.