

## Quadrant EPP Duratron® PAI T5530 PAI, 30% glass fibers, compression moulded (ISO Data)

Category : Polymer , Thermoplastic , Polyamide-imide (PAI) , Polyamide-Imide, Glass Filled

### Material Notes:

This 30 % glass fibre reinforced grade offers higher stiffness, strength and creep resistance than the Duratron PAI grades mentioned above. It is well suited for structural applications supporting static loads for long periods of time at high temperatures. In addition, Duratron T5530 PAI exhibits superb dimensional stability up to 250 °C making it extremely popular for precision parts in e.g. the electrical and semiconductor industries. The suitability of Duratron T5530 PAI for sliding parts, however, is to be carefully examined since the glass fibres tend to abrade the mating surface. Very high maximum allowable service temperature in air (250°C continuously) Excellent retention of mechanical strength, stiffness and creep resistance over a wide temperature range Dimensional stability up to 260°C Excellent wear & frictional behaviour (particular Duratron T4301 & T4501 PAI) Very good UV-resistance Good resistance against high energy radiation (gamma- and X-rays) Inherent low flammability

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Quadrant-EPP-Duratron-PAI-T5530-PAI-30-glass-fibers-compression-moulded-ISO-Data.php](http://www.lookpolymers.com/polymer_Quadrant-EPP-Duratron-PAI-T5530-PAI-30-glass-fibers-compression-moulded-ISO-Data.php)

Physical Properties	Metric	English	Comments
Density	1.61 g/cc	0.0582 lb/in <sup>3</sup>	ISO 1183-1
Moisture Absorption at Equilibrium	1.7 %	1.7 %	50% RH
Water Absorption at Saturation	3.2 %	3.2 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell E	85	85	ISO 2039-2
Hardness, Shore D	90	90	
Ball Indentation Hardness	275 MPa	39900 psi	ISO 2039-1
Tensile Strength	125 MPa	18100 psi	at Break (NYP); ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	6.40 GPa	928 ksi	ISO 527-1/-2
Flexural Strength	170 MPa	24700 psi	
Compressive Strength	55.0 MPa	7980 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	104 MPa	15100 psi	ISO 604
	@Strain 2 %	@Strain 2 %	
	190 MPa	27600 psi	ISO 604

Mechanical Properties	@Strain 5 % Metric	@Strain 5 % English	Comments
Charpy Impact Unnotched	3.00 J/cm <sup>2</sup>	14.3 ft-lb/in <sup>2</sup>	ISO 179-1/1eU
Charpy Impact, Notched	0.350 J/cm <sup>2</sup>	1.67 ft-lb/in <sup>2</sup>	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.35 - 0.60	0.35 - 0.60	

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 μm/m-°C	19.4 μin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Thermal Conductivity	0.360 W/m-K	2.50 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	250 °C	482 °F	Continuous
Deflection Temperature at 1.8 MPa (264 psi)	280 °C	536 °F	ISO 75-1/-2
Glass Transition Temp, Tg	280 °C	536 °F	DSC, 20°C/min.; ISO 11357-1/-2
Flammability, UL94	V-0	V-0	
Oxygen Index	50 %	50 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.0e+14 ohm-cm	>= 1.0e+14 ohm-cm	IEC 60093
Surface Resistivity per Square	>= 1.0e+13 ohm	>= 1.0e+13 ohm	IEC 60093
Dielectric Constant	4.4	4.4	IEC 60250
	@Frequency >=100000 Hz	@Frequency >=100000 Hz	
Dielectric Strength	28.0 kV/mm	711 kV/in	
Dissipation Factor	0.022	0.022	IEC 60250
	@Frequency 100000 Hz	@Frequency 100000 Hz	
Comparative Tracking Index	175 V	175 V	IEC 60112

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
European Food 1935/2004	No	No	
FDA	No	No	

<b>USP Class VI Compliance Properties</b>	<b>No Metric</b>	<b>No English</b>	<b>Comments</b>
<b>Chemical Resistance Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Acids, Strong (pH 1-3)	Limited	Limited	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Unacceptable	Unacceptable	
Alkalies, Weak	Limited	Limited	
Chlorinated Solvents	Acceptable	Acceptable	
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Limited	Limited	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Acceptable	Acceptable	

## Contact Songhan Plastic Technology Co.,Ltd.

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