

CoolPoly D Series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection moulding grade polymers.

The D Series is electrically non-conductive and can be used for its di-electric properties.

Typical Properties of CoolPoly® Di-Electric Grades															
Properties	Test Method	Units	D2 (LCP)	D1202 (PP)	D3608 (PPA)	D3610 (PA66)	D3612 (PA66)	D4302 (COPE)	D5108 (PPS)	D5110 (PPS)	D5112 (PPS)	D5502 (LCP)	D5506 (LCP)	D8102 (TPE)	D8104 (TPE)
Thermal															
Thermal Conductivity	ASTM E1461	W/mK	10	5.0	1.6	1.9	6.0	2.3	10.0	2.00	6.0	1.46	10.0	3.0	1.3
Thermal Diffusivity	ASTM E1461	cm ² /sec	0.05	0.025	0.009	0.01	0.028	0.0118	0.07	0.126	0.0353	0.00843	0.05	0.0144	0.00632
Specific Heat	ASTM E1461	J/g °C	0.97	1.3	1.03	1.1	1.29	1.36	1	1.1	0.949	1	1	1.75	1.39
Flammability	UL 94					V0 (1.5mm)	V0 (2mm)		V0	V0	V0			HB	V0
Mechanical															
Tensile Modulus	ISO 527-1	MPa	10700	5300	10000	15600	12500	4780	23600	14600	26200	14800	10900		31.9*
Tensile Strength	ISO 527-1	MPa	55	24	86	90	60	40	37	90	42	70	50	2.25*	2.52*
Nominal Strain @ Break	ISO 527-1	%	0.76	0.57	1	0.7	0.6	2.2	0.16	0.8	0.23	0.635	0.7	73*	151*
Flexural Modulus	ISO 178	MPa	12700	6200	9500	14000	11500	3330	19400	14000	19800	10200	12300		
Flexural Strength	ISO 178	MPa	84	43	120	110	100	61	69	150	77	101	84		
Unnotched Charpy	ISO 179-1	kJ/m ²	5.6	6.8	13	12		24.5	2.5	14.4	4	3.7	6		
Notched Charpy	ISO 179-1	kJ/m ²	2.8	1.5	2.8			2.95	1.1	3.8	1.2	2.9	3.2		
Physical															
Density	ISO 1183	g/cm ³	1.8	1.39	1.7	1.9	1.6	1.47	1.82	1.63	1.73	1.72	1.8	1.25	1.48
Hardness		Shore						73D						45A	
Mould Shrinkage															
Flow	ASTM D551	%		0.3		0.4	0.3	0.7	0.2	0.3	0.1	0.1	0.1	0.5	
Cross-Flow	ASTM D551	%		0.6		0.5	0.4	1	0.4	0.7	0.3	0.2	0.3	2	

*ISO 37

The values quoted are the average of results obtained under laboratory conditions and are given only as an indication to enable customers to make use of our products.

Prospective users should determine the suitability of materials before adopting them on a commercial scale.

Performance Plastics Ltd

Tel. 01425 403543

Website

www.performance-plastics.co.uk