

# COOLPOLY® D5110

## COOLPOLY®

CoolPoly D series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals. The D series is electrically non-conductive and can be used for its dielectric properties.

### Product information

Resin Identification	PPS	ISO 1043
Part Marking Code	>PPS<	ISO 11469

### Typical mechanical properties

Tensile modulus	13800 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	104 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.2 %	ISO 527-1/-2
Flexural modulus	13000 MPa	ISO 178
Flexural strength	170 MPa	ISO 178
Charpy impact strength, 23°C	19.7 kJ/m <sup>2</sup>	ISO 179/1eU
Poisson's ratio	0.33 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Temperature of deflection under load, 1.8 MPa	260 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	280 °C	ISO 75-1/-2
Thermal conductivity, flow	1.5 W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	1.3 W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.7 W/(m K)	ISO 22007-2

### Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10

### Electrical properties

Relative permittivity, 1MHz	3.6	IEC 62631-2-1
Dissipation factor, 1MHz	10 E-4	IEC 62631-2-1
Surface resistivity	1E14 <sup>[1]</sup> Ohm	IEC 62631-3-2

[1]: RI Data

### Physical/Other properties

Density	1630 kg/m <sup>3</sup>	ISO 1183
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### Injection

Back pressure	0.7 MPa
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### Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant, Light weight

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