



# DuraForm® PA Plastic

SELECTIVE LASER SINTERING (SLS) MATERIAL

## General Properties

Measurement	Condition	Metric	U.S.
Specific Gravity	ASTM D792	1.00 g/cm <sup>3</sup>	1.00 g/cm <sup>3</sup>
Moisture Absorption - 24 hours	ASTM D570	0.07%	0.07%

## Mechanical Properties

Measurement	Condition	Metric	U.S.
Tensile Strength, Ultimate	ASTM D638	43 MPa	6237 psi
Tensile Modulus	ASTM D638	1586 MPa	230 ksi
Elongation at Break (%)	ASTM D638	14%	14%
Flexural Strength, Ultimate	ASTM D790	48 MPa	6962 psi
Flexural Modulus	ASTM D790	1387 MPa	201 ksi
Hardness, Shore D	ASTM D2240	73	73
Impact Strength (Notched Izod)	ASTM D256	32 J/m	0.6 ft-lb/in
Impact Strength (unnotched Izod, 23°C)	ASTM D256	336 J/m	6.3 ft-lb/in
Heat Deflection Temperature	ASTM D5420	2.7 J	2.0 ft-lb

## Thermal Properties

Measurement	Condition	Metric	U.S.
Heat Deflection Temperature (HDT)	ASTM D648 @ 0.45 MPa @ 1.82 MPa	180 °C 95 °C	356 °F 203 °F
Coefficient of Thermal Expansion	ASTM E831 @ 0 - 50 °C @ 85 - 145 °C	82.6 μm/m-°C 179.2 μm/m-°C	45.9 μin/in-°F 99.6 μin/in-°F
Specific Heat Capacity	ASTM E1269	1.64 J/g-°C	0.392 BTU/lb-°F
Thermal Conductivity	ASTM E1225	0.70 W/m-K	4.86 BTU-in/hr-ft <sup>2</sup> -°F
Flammability	UL 94	HB	HB