

DuraForm PAX Natural

Selective Laser Sintering
(SLS)

Production-grade, high impact nylon copolymer with high elongation and long-term stability for tough plastic parts.

DuraForm PAX Natural is a nylon copolymer that offers properties similar to injection moulded plastic and features high impact resistance with high elongation at break in any direction, including Z.

Engineered for easy processing and high recyclability, DuraForm PAX Natural is ideal for functional prototypes and end-use parts with good mechanical properties and long-term stability.

With impressive long-term stability of over five years indoor, DuraForm PAX Natural is among the top performing SLS materials for long-term use.

DuraForm PAX Natural is also compliant with ISO 10993-5, Biological evaluation of medical devices – Part 5: Tests for in vitro cytotoxicity.

Why choose DuraForm PAX Natural?

- General purpose prototypes
- Orthotics
- Tooling handles and grips for use in tough, rugged environments
- Living hinges
- Liquid reservoirs
- Enclosures requiring high impact and high toughness

Advantages

- Durable and tough for true functional plastic parts
- High reuse rates reduce waste and decrease production costs
- Long-term stability of more than five years for indoor applications
- Material is compliant with ISO 10993-5, Biological evaluation of medical devices – Part 5: Tests for in vitro cytotoxicity



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General Properties	Value (XY Axis)	Test Method
Colour	Natural/white	N/A
Part density	1.03 g/cm ³	ISO 1183
Thermal Properties		
Heat deflection temperature (0.45Mpa)	102° C	ISO 75B
Heat deflection temperature (1.8Mpa)	44° C	ISO 75A
CTE -40° to 15°C	100 ppm/°K	ISO 11359-2
CTE 55° to 125°C	231 ppm/°K	ISO 11359-2
Mechanical Properties		
Tensile strength (ultimate)	43 MPa	N/A
Tensile modulus	1500 MPa	ISO 527
Elongation at break	174 %	ISO 527
Elongation at yield	4.6 %	ISO 527
Flexural strength	40 MPa	ISO 178
Flexural modulus	1040 MPa	ISO 178
Impact strength – Izod (notched)	0.3 kJ/m ²	ISO 180-N
Impact strength – Izod (un-notched)	Does Not Break	ISO 180-U
Shore hardness	66D	ISO 7619
Electrical Properties		
Dielectric Strength@ 3mm thickness	15.2 kV/mm	ASTM D149
Volume resistivity	6.53 x 10 ¹⁴ ohm-cm	ASTM D257
Other Properties		
Flammability classification	HB	UL94
Water Absorption (24 hours)	0.74 %	ISO 62

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Have a question? Call our friendly team on

+44 (0) 800 304 7196

Specifications are subject to change without notice.

The technical data indicated above is an average value of the test result of a part created under proper management and appropriate conditions.

The value is for reference and is not guaranteed.