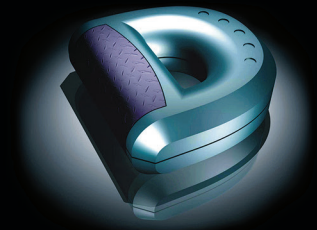


EOS PA 2241 FR FLAME RETARDANT NYLON 12

PA 2241 FR is a white, flame retardant polyamide 12 that is suitable for a variety of specialist applications.



Drumlord Limited
Prototyping Technologies

PA 2241 FR CONTAINS A HALOGEN-BASED FLAME RETARDANT AND IS A VALUABLE ADDITION TO THE FAMILY OF SLS MATERIALS. SUITABLE FOR AVIATION (JAR 25 APPROVED), AUTOMOTIVE, ELECTRICAL AND GENERAL INDUSTRIAL AND ENGINEERING APPLICATIONS WHERE FLAME RETARDANT PROPERTIES ARE REQUIRED.

CHARACTERISTICS

COLOUR:	White
DENSITY:	1000 kg/m ³
CHEMICAL RESISTANCE:	General Chemical Resistance, Grease Resistance, Oil Resistance
APPLICATIONS:	Aircraft and Aerospace

PROPERTIES:

- flame retardant
- economic
- high strain at tensile strength

ACCEPTANCE CRITERIA:

- JAR 25 (aviation)

TYPICAL APPLICATIONS:

- aviation (interior, e.g. air ducts and air outlet valves)

MECHANICAL PROPERTIES

	DRY / COND	UNIT	TEST STANDARD
Tensile Modulus	1900 / 1600	MPa	ISO 527-1/-2
Tensile Strength (X and Y Directions)	49 / 44	MPa	ISO 527-1/-2
Tensile Strength (Z Direction)	46 / 44	MPa	ISO 527-1/-2
Strain at Tensile Strength (X and Y Directions)	7 / 11	%	ISO 527-1/-2
Strain at Tensile Strength (Z Direction)	6 / 8	%	ISO 527-1/-2
Strain at break (X and Y Directions)	15 / 22	%	ISO 527-1/-2
Strain at break (Z Direction)	6 / 9	%	ISO 527-1/-2
Temp. of deflection under load (1.80 MPa, X Direction)	84 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa, X Direction)	154 / *	°C	ISO 75-1/-2

The properties of parts manufactured using additive manufacturing technology (e.g. laser sintering, stereolithography, Fused Deposition Modelling, 3D printing) are, due to their layer-by-layer production, to some extent direction dependent. This has to be considered when designing the part and defining the build orientation.

THERMAL PROPERTIES

	DRY	TEST STANDARD
Melting temperature (20°C/min)	185°C	ISO 11357-1/-3
Flammability Test Passed	1.0/1.5/2.0mm	CS 25 / JAR25 / FAR 25 § 25-853 12s Ignition Time
Flammability Test Passed	1.0/1.5/2.0mm	CS 25 / JAR25 / FAR 25 § 25-853 60s Ignition Time
Smoke Density Test Passed	1.0/1.5/2.0mm	ABD 0031 (Issue:F), method: ATIM 2.0007
Toxicity Test Passed	1.0/1.5/2.0mm	ABD 0031 (Issue:F), method: ATIM 3.0005

The information in this data sheet, as supplied by the material manufacturers, is provided for general guidance only, in good faith and without warranty. The performance characteristics may vary depending on the application, operating conditions or other materials in combination and it is the responsibility of the customer to determine the suitability of the product for its end use.

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