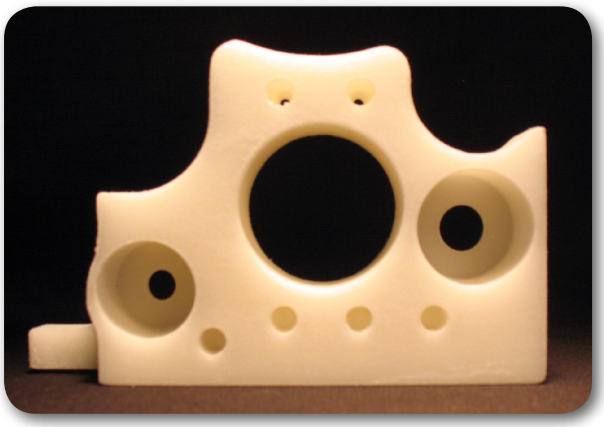
250-C

Performance Polyamide

Engineered Materials For Rapid Manufacturing

"An engineered polyamide which produces high strength parts with excellent surface finish while eliminating waste powder from your process."

- **Tightly controlled particle size distribution produces superior part surface finish and feature definition.**
- **Material stabilized against degradation eliminates waste and dramatically reduces cost.**
- **Produces tough, flexible parts that may be used for many applications.**



Advanced Laser Materials' RM^2 250-C is a specially formulated polyamide engineered for laser sintering. The exceptional breakthrough in the RM^2 250-C material is its high process stability. The polyamide bases of the RM^2 250-C are engineered to ensure that un-sintered powder can be repeatedly reused in your production process. This means little to no waste product from your process and a considerable material cost savings.

The high strength and elongation to break of RM^2 250-C material parts allow users to fabricate parts for a wide variety of applications where toughness and flexibility are paramount.

The excellent reusability of the RM^2 250-C material through your process also ensures highly repeatable results from build to build, a fundamental requirement for rapid manufacturing.

ALM's line of Rapid Manufacturing Materials (RM^2) are produced to high quality standards. Every material shipment is accompanied by detailed quality conformance documents to support your quality manufacturing standards.

RM² 250-C Data Sheet

MATERIAL PROPERTIES		TEST	RM² 250-C
Density, Bulk		ASTM D1895	0.50 g/cc
Particle Size			
	d90	Laser Diffraction	55-60 µm
	d50	Laser Diffraction	40-50 µm
	d10	Laser Diffraction	30-40 µm

THERMAL PROPERTIES		TEST	RM² 250-C
Melting Point		ASTM D3418	181 ºC
Melt Flow Rate	(180 sec., 2.16kg, 235 ºC)	ASTM D1238	7 ± 2 g/10 min

TYPICAL PART PROPERTIES		TEST	RM² 250-C
Tensile Strength, Ultimate			
	XY Orientation	ASTM D638	46 MPa / 6700 psi
	Z Orientation	ASTM D638	36 MPa / 5200 psi
Tensile Modulus		ASTM D638	1,740 MPa / 256 ksi
Elongation at Break			
	XY Orientation	ASTM D638	16 %
	Z Orientation	ASTM D638	4 %
Heat Deflection Temp.	(1.82 MPa)	ASTM D648	86 ± 1 ºC
Sintered Part Density		ASTM D792	0.98g/cc

SURFACE FINISH	TEST	RM² 250-C
Unfinished Part	ISO 4287	9 ± 1 µm

ELECTRICAL PROPERTIES		TEST	RM² 250-C
Volume Resistivity	(50% RH, 22 ºC, 500V)	ASTM D257-93	3.1 x 10_{14} Ohm/cm

CHEMICAL RESISTANCE

Matrix in Polyamide 12 with a good chemical resistance to alkaline, hydrocarbons, oils, gasoline's, gas oil and solvents. Attack by the acids. Sealing of wall starting from 1.6 mm thickness.

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