

Improved yield especially for delicate featured geometries

SL 7520

CIBATool® BUILD MATERIAL FOR THE SLA® 7000 SYSTEM

Engineered based on direct input from our customers, SL 7520 material helps you achieve a new level of productivity on our top of the line SLA 7000 solid imaging system.

GET IMPROVED PART STRENGTH RIGHT OUT OF THE VAT, AND EXCELLENT CLARITY. SL 7520 is the highest green strength material developed to date for the SLA 7000 system; it maximizes build yield and offers good stability during postcured handling. SL 7520 also features excellent clarity for flow analysis and viewing of internal part features and assemblies.

EXCEPTIONAL THROUGHPUT FOR INVESTMENT CASTING. In addition to its all-around performance, SL 7520 material provides substantially faster build speed when using the QuickCast™ build style.

DEVELOP BETTER PRODUCTS WHILE REDUCING DOWN-STREAM ERRORS AND COSTS. With SL 7520 material you'll have more time to test new ideas and innovations,



Ski goggles courtesy of Smith Sport

more time to identify bugs and design flaws before proceeding to tooling and manufacturing. You'll reduce costly retools and recalls – and you'll beat your competition to market with the products your customers want.

Use SL 7520 material for:

- INVESTMENT CASTING
- FORM, FIT AND FUNCTION TESTING
- FLOW ANALYSIS
- CONCEPT AND COMMUNICATION MODELS

"This material is ideal for applications where out-of-the-vat high part strength is required. Thin wall and fine-featured parts benefit from this material."

– Mervyn Rudgley
Senior Director
Stereolithography Business
Development
3D Systems, Inc.

SL 7520 Typical Properties

for the SLA 7000 system



Liquid Material

MEASUREMENT	CONDITION	VALUE
Appearance		Clear amber
Density	@ 25°C (77°F)	1.18 g/cm ³
Viscosity	@ 30°C (86°F)	450 cps
Penetration depth (Dp)		4.9 mils
Critical exposure (Ec)		9.5 mJ/cm ²
Part building layer thickness*		0.025mm, 0.075mm, 0.150mm (0.001in, 0.003in, 0.006in)

*Dependent upon part geometry and build parameters.

Post-Cured Material

MEASUREMENT	TEST METHOD	VALUE	VALUE
		90-minute UV post-cure	90-minute UV + 160°C Thermal
Tensile strength	ASTM D 638	62 - 65 MPa (9,000 - 9,400 PSI)	63 - 69 MPa (9100 - 10,000 PSI)
Tensile modulus	ASTM D 638	2,937 - 3,158 MPa (426 - 458 KSI)	2,882 - 2,958 MPa (418 - 429 KSI)
Elongation at break	ASTM D 638	5.2 - 7.2%	2.9 - 3.8%
Flexural strength	ASTM D 790	97 - 103 MPa (14,100 - 15,000 PSI)	90 - 127 MPa (13,100 - 18,400 PSI)
Flexural modulus	ASTM D 790	2,827 - 2,903 MPa (410 - 421 KSI)	3,785 - 3,854 MPa (549 - 559 KSI)
Impact strength, notched Izod	ASTM D 256	15.5 - 18.1 J/m (0.29 - 0.34 ft - lbs/in)	10.7 - 15.0 J/m (0.20 - 0.28 ft - lbs/in)
Heat deflection temperature	ASTM D 648 @ 66 PSI @ 264 PSI	54°C (129°F) 49°C (120°F)	89°C (192°F) 72°C (162°F)
Glass transition, Tg	DMA, E'' peak	68°C (154°F)	87°C (189°F)
Coefficient of thermal expansion	TMA (T<Tg)	99 ppm/m.°C	105 ppm/m.°C
Thermal conductivity		0.176 W/m.°K (4.20 x 10 ⁻⁴ Cal/sec.cm.°C)	
Hardness, Shore D	DIN 53505	86	90
Density		1.24g/cm ³	

MATERIAL UPGRADE PROGRAM Upgrade your existing material and take advantage of a substantial discount off the regular purchase price with 3D Systems Material Upgrade Program. To place an order, contact your local sales office or in the US call toll free 800.889.2964.

Like all our stereolithography materials, SL 7520 is developed and manufactured by Vantico (formerly Ciba Specialty Chemicals, Performance Polymers Division), for exclusive distribution by 3D Systems. Vantico and 3D Systems collaborate continually to develop faster, more durable, and more accurate materials for all our SLA solid imaging systems, and for your solid imaging applications.

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