

Accura® Materials Selection Guide for Stereolithography (SLA)

MATERIAL PROPERTIES / CHARACTERISTICS

	Color	Accuracy	High Stiffness	High Elongation	High Impact	Heat Resistance	Moisture Resistance	Long Term UV Stable	Optical Clarity	Key Differentiator
DURABLE										
Accura® AMX™ Durable Natural	Natural/Tan			●●●●●	●●●●●		●●●●●	●●●●●	NA	Best for Removeable Mandrel Tooling, Biocompatible
Accura® AMX™ Tough FR V0 Black	Black			●●●●●	●●●●●		●●●●●	●●●●●	NA	Flame Retardant
TOUGH										
Accura® 25	White	●●●●		●●●●	●●●●				NA	Versatile White Parts
Accura® ClearVue™	Clear	●●●		●●●	●●●●		●●●		●●●●●	Industry-Best Clarity, Biocompatible
Accura® ClearVue™ Free (SL7870)	Clear	●●●	●●●●		●●●●				●●●●●	Antimony-Free Clarity
Accura® Xtreme	Gray	●●●●●	●●●	●●●●	●●●●		●●●	●●●	NA	Industry-Benchmark Tough Parts
Accura® Xtreme Black	Black	●●●●●		●●●●	●●●●		●●●	●●●	NA	Industry-Benchmark Tough Parts
RIGID										
Accura® 55	White	●●●●	●●●●		●●●●				NA	ABS-like with higher tensile properties
Accura® 60	Clear	●●●●	●●●●	●●●	●●●●				●●●●	Polycarbonate-Like
Accura® ABS White (SL7810)	White	●●●	●●●	●●●●	●●●●				NA	ABS-like parts with more impact resistance
Accura® AMX™ Rigid Black	Black		●●●●	●●●●	●●●●		●●●●●	●●●●●	NA	Biocompatible, UV Stable, Black
Accura® CastPro™	Clear/Amber	●●●●	●●●●				●●●		●●●	Industry-Best Investment Casting Performance
Accura® SbF	Clear/Amber	●●●●	●●●				●●●●		●●●	Antimony-Free Investment Casting
Accura® Xtreme White 200	White	●●●●		●●●●	●●●●●		●●●		NA	Higher Toughness Xtreme material
HIGH TEMPERATURE, STIFF & UNFILLED										
Accura® AMX™ High Temp 300C	Translucent Amber		●●●●	NA		●●●●●	●●●●●	●●●●●	●●	Industry-Best Heat Resistance
Accura® Phoenix	Clear/Amber		●●●●	NA		●●●●●	●●●		●●●	Clarity at High Temperature
Accura® SL5530	Translucent Amber		●●●●	NA		●●●●●	●●●		●●	Hi-Temp Under-hood, Chemical Endurance
CERAMIC/MINERAL FILLED, STIFF & HIGH TEMP										
Accura® AMX™ Rigid Composite White	White	●●●●	●●●●	NA		●●●●	●●●●●	●●●●●	NA	Industry-Best Modulus and Processing, Wind-Tunnel Parts
Accura® Bluestone™	Blue	●●●●●	●●●●●	NA		●●●●●	●●●●●	●●●	NA	Excellent Tooling, Abrasion Resistance
Accura® Composite PIV	Purple	●●●●●	●●●●●	NA		●●●●	●●●●●	●●●	NA	Industry-Best Wind-Tunnel parts for PIV
Accura® HPC	White	●●●●●	●●●●●	NA		●●●●	●●●●●	●●●	NA	Industry-standard, High Modulus, High Rigidity, White
Accura® PEAK™	Frosted Natural	●●●●	●●●●●	NA		●●●●●	●●●		●●	Balanced for High Temp, Modulus, and Processing

Ratings are relative to other materials presented. Blanks indicate a characteristic that is not part of the resin's intent, but it may be considered based on other key requirements. Customers need to review the product datasheet for more detailed information, verify specific printer compatibility, and resin-suitability to any potential application.

RATINGS KEY

●●●●●	= BEST
●●●●	= BETTER
●●●	= GOOD
●●	= FAIR
NA	= Not Intended

KEY APPLICATION AREAS

MECHANICAL PROPERTIES

	General Purpose Models	Snap Fit, Functional Parts	Master Patterns	Investment Casting, QuickCast®	Jigs, Fixtures, Tooling	Injection Molding	Viscosity (cPs)	Flexural Modulus (MPa)	Flexural Strength (MPa)	Tensile Modulus (MPa)	Tensile Strength (MPa)	Elongation at Break (%)	Impact, Notched Izod (J/m)	Heat Deflection Temp (°C) @66 psi @264 psi	
DURABLE							(@ 30°C)	ASTM D 790	ASTM D 790	ASTM D 638	ASTM D 638	ASTM D 638	ASTM D 256	ASTM D 648	ASTM D 648
Accura® AMX™ Durable Natural		●●●●●					990	600	20	1000	32	80	64	42	25
Accura® AMX™ Tough FR V0 Black		●●●●●					1140	1000	38	1300	33	35.5	33	63	47
TOUGH															
Accura® 25	●●●●●	●●●●●	●●●		●●●		250	1400	57	1600	38	16	22	61	53
Accura® ClearVue™	●●●	●●●		●●●			180	2300	83	2560	52	6	46	51	50
Accura® ClearVue™ Free (SL7870)	●●●	●●●		●●●			180	2100	75	2100	40	12	35	48	41
Accura® Xtreme	●●●●●	●●●●●	●●●●●		●●●		300	1900	62	1900	41	18	44	62	54
Accura® Xtreme Black	●●●●●	●●●●●	●●●●		●●●		200	1600	59	2600	43	27	30	60	50
RIGID															
Accura® 55	●●●●●	●●●	●●●●●				170	2965	99	3290	66	7	17	57	52
Accura® 60	●●●	●●●		●●●●			165	2900	95	2900	63	10	30	55	50
Accura® ABS White (SL7810)	●●●●●	●●●●●	●●●				180	2100	75	2300	47	10	35	51	
Accura® AMX™ Rigid Black	●●●	●●●●●					300	2300	88	2100	52	24	23	64	52
Accura® CastPro™				●●●●●			300	1900	62	1900	41	18	44	62	54
Accura® SbF				●●●●●			120	2700	91	3200	58	5.6	27	53	49
Accura® Xtreme White 200	●●●	●●●●●					750	2400	74	2600	48	14	65	47	42
HIGH TEMPERATURE, STIFF & UNFILLED															
Accura® AMX™ High Temp 300C		NA				●●●●	1220	3400	117	3500	59	2.2	10	300	124
Accura® Phoenix		NA					135	2300 2410*	100 139*	2640 2940*	61 77*	5 6*	19 23*	83 137*	64 103*
Accura® SL5530		NA					225	3182	114	2992	60	3.5	21	68 173*	56 114*
CERAMIC/MINERAL FILLED, STIFF & HIGH TEMP															
Accura® AMX™ Rigid Composite White		NA			●●●●●	●●●●●	1260	9600	143	10200	85	1.9	15.4	88	79
Accura® Bluestone™		NA			●●●●●	●●●●●	1450	9050	139	9650	67	1.9	15	65 275*	65
Accura® Composite PIV		NA			●●●●●	●●●●●	1000	9900	142	9300	72	1.2	13	72	59
Accura® HPC		NA			●●●●●	●●●●●	1000	9500	147	9400	75	1.9	17	73 120*	62 87*
Accura® PEAK™		NA			●●●		625	4485	102	4505	67	1.9	24	78 153*	59 124*

*After Thermal Post-Cure. Properties based on materials processed on large frame 3D Systems SLA printers. Not all materials will build in all build modes and on every printer model. Check with your local sales representative to verify that the combination you need is available.

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