

# MATERIAL SELECTION GUIDE FOR STEREOLITHOGRAPHY – SLA

## MATERIAL PROPERTIES / CHARACTERISTICS

## KEY APPLICATION AREAS

Accuracy	HiTemp	Moisture Resistance	Optical Clarity	Durability	Color
----------	--------	---------------------	-----------------	------------	-------

Investment Casting/QuickCast®	RTV/Master Patterns	Snap Fit Assemblies	General Purpose Models	Automotive/Under the hood	Wind Tunnel Testing
-------------------------------	---------------------	---------------------	------------------------	---------------------------	---------------------

### POLYPROPYLENE-LIKE CLASS

Accura 25	●●●●		●●●		●●●●	White
Accura PP White (SL 7811)	●●●		●●●●		●●●●	White

	●●●●	●●●●	●●●●		
	●●●	●●●●	●●●		

### TOUGH/DURABLE CLASS

Accura Xtreme	●●●●		●●●		●●●●	Grey
Accura Xtreme White 200	●●●●				●●●●●	White

	●●●●	●●●●	●●●●		
	●●●	●●●●●	●●●		

### ABS-LIKE CLASS

Accura 55	●●●●		●●●		●●●	White
Accura ABS White (SL 7810)	●●●		●●●●		●●●●	White
Accura ABS Black (SL 7820)	●●●		●●●●		●●●●	Black

	●●●	●●●	●●●●		
	●●●	●●●	●●●		
	●●●	●●●	●●●		

### CLEAR CLASS

Accura ClearVue Free (SL 7870)	●●●		●●●●	●●●●	●●●●	Clear
Accura ClearVue	●●●		●●●●●	●●●●●	●●●●	Clear
Accura 60	●●●●		●●●	●●●	●●●	Clear-bluish

●●●	●●●	●●●	●●●		
	●●●	●●●	●●●		
●●●●	●●●●	●●●	●●●●●		

### CASTING CLASS

Accura CastPro	●●●●		●●●●●			Clear amber
Accura CastPro Free (SL 7800)			●●●			Clear amber

●●●●●					
●●●●●					

### HIGH TEMP & COMPOSITE CLASS

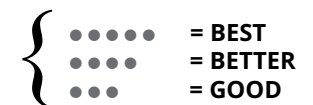
Accura Phoenix	●●●	●●●●	●●●	●●●		Clear/bluish
Accura 48 HTR		●●●●	●●●			Clear amber
Accura SL 5530		●●●●	●●●			Clear amber
Accura PEAK	●●●●	●●●●	●●●●			Translucent amber
Accura HPC	●●●●●	●●●	●●●●			White
Accura CeraMAX	●●●●●	●●●●●	●●●●●			White
Accura Bluestone	●●●●●	●●●●●	●●●●●			Blue

				●●●●	
				●●●●	
				●●●	
				●●●●●	●●●●
					●●●●●
					●●●●●
					●●●●●

**Ranking:** Ratings are relative to other materials presented.

\* Please see the product datasheet for more detailed information.

**RATING SYSTEM**



	Viscosity (cps) (@ 30 °C)	Flexural Modulus (MPa) ASTM D 790	Flexural Strength (MPa) ASTM D 790	Tensile Modulus (MPa) ASTM D 638	Tensile Strength (MPa) ASTM D 638	Elongation at Break ASTM D 638	Impact Strength, Notched (J/m) ASTM D 256	Heat Defl. Temp (°C) ASTM D 648
<b>POLYPROPYLENE-LIKE CLASS</b>								
Accura 25	250	1380-1660	55-58	1590-1660	38	13-20 %	19-24	@ 66 PSI - 58-63 @ 264 PSI - 51-55
Accura PP White (SL 7811)	210	1960-2060	64-66	2030-2230	40-42	7-13 %	42-59	@ 66 PSI - 47
<b>TOUGH/DURABLE CLASS</b>								
Accura Xtreme	250-300	1520-2070	52-71	1790-1980	33-44	14-22 %	35-52	@ 66 PSI - 62 @ 264 PSI - 54
Accura Xtreme White 200	650-750	2350-2550	75-79	2300-2630	45-50	7-20 %	55-66	@ 66 PSI - 47 @ 264 PSI - 42
<b>ABS-LIKE CLASS</b>								
Accura 55	155-185	2690-3240	88-110	3200-3380	63-68	5-8 %	12-22	@ 66 PSI - 55-58 @ 264 PSI - 51-53
Accura ABS White (SL 7810)	210	2040-2120	74-76	2290-2400	46-48	8-14 %	24-47	@ 66 PSI - 51
Accura ABS Black (SL 7820)	210	2260-2370	75-78	1890-2440	45-47	6-13 %	39-56	@ 66 PSI - 51
<b>CLEAR CLASS</b>								
Accura ClearVue Free (SL 7870)	180	1940-2250	73-76	1920-2010	38-42	10-22 %	23-51	@ 66 PSI - 48 @ 264 PSI - 41
Accura ClearVue	235-260	1980-2310	72-84	2270-2640	46-53	3-15 %	40-58	@ 66 PSI - 51 @ 264 PSI - 50
Accura 60	150-180	2700-3000	87-101	2690-3100	58-68	5-13 %	15-25	@ 66 PSI - 53-55 @ 264 PSI - 48-50
<b>CASTPRO CLASS</b>								
Accura CastPro	240-260	2310-2340	82-84	2490-2620	52-53	4.1-8.3 %	43-49.5	@ 66 PSI - 51 @ 264 PSI - 50
Accura CastPro Free (SL 7800)	205	2200-2480	81-83	1940-2350	45-48	9-19 %	35-50	@ 66 PSI - 62
<b>HIGH TEMP &amp; COMPOSITE CLASS</b>								
Accura Phoenix	120-130	2140-2330	96-100	2340-2640	45-61	3-5 %	13-19	@ 66 PSI - 137* @ 264 PSI - 103*
Accura 48 HTR	200-250	2760-3400	105-118	2800-3980	64-67	4-7 %	22-29	@ 66 PSI - 130 ‡ @ 264 PSI - 110 ‡
Accura SL 5530	210-270	2620-3240	63-87	2889-3144	57-61	3.8-4.4 %	21	@ 66 PSI - 70-85 ‡ @ 264 PSI - 55-58 ‡
Accura PEAK	605	4180-4790	77-126	4220-4790	57-78	1.3-2.5 %	21.3-27.3	@ 66 PSI - 153** @ 264 PSI - 124**
Accura HPC	700-1000	8700-10200	137-157	9000-9700	66-89	0.8-1.9 %	14-17	@ 66 PSI - 250** @ 264 PSI - 87**
Accura CeraMAX	1500-2000	8270-8370	137-145	9460-9680	78-87	1.0-1.5 %	14.5-17.9	@ 66 PSI - 220 ** @ 264 PSI - 97**
Accura Bluestone	1200-1800	8300-9800	124-154	7600-11700	66-68	1.4-2.4 %	13-17	@ 66 PSI - 267-284**

\*After 2 hour 80C thermal Postcure  
\*\* After 2 hour 120C thermal Postcure

‡ After 2 hour 160C thermal Postcure (note - applies to 5530 and Accura 48)

[www.3dsystems.com](http://www.3dsystems.com)



Warranty/Disclaimer: The performance characteristics of these products may vary according to product application, operating conditions, or with end use. 3D Systems makes no warranties of any type, express or implied, including, but not limited to, the warranties of merchantability or fitness for a particular use.

© 2018 by 3D Systems, Inc. All rights reserved. Specifications subject to change without notice.  
3D Systems, the 3D Systems logo, Accura and QuickCast are registered trademarks of 3D Systems, Inc.