Accura® 48HTR

A strong, rigid and translucent SLA plastic for applications that require high-heat resistance.

High Temperature Class

Stereolithography (SLA)

HIGH PERFORMANCE AT HIGH TEMPERATURE

Accura 48 HTR is a rigid and stiff plastic material for applications that require high-heat resistance, ideal for automotive, aerospace and electronic components testing up to 130 °C/266 °F. Material transparency allows for visualization of internal structures in assemblies and fluid flow analysis.

Offering long term stable properties and chemicals resistance, it is ideal for under-the-hood component testing.

Liquid Material

MEASUREMENT	CONDITION	VALUE
Viscosity	@ 30 °C (86 °F)	200-250 cps
Penetration Depth (Dp)		5.5 mils
Critical Exposure (Ec)		7.4 mJ/cm^2
Color		ClearAmber
Liquid Density	@ 25 °C (77 °F)	1.17 g/cm^3 | 0.04 lbs/in^3

Printer Compatibility/Packaging:

ProJet® 6000/7000 SLA printers:	2L cartridge
ProX® 800/950, iPro™ 8000/9000 SLA printers:	10 kg cartridge
Viper si2™ and SLA 5000 printers:	10 kg standard bottle

APPLICATIONS

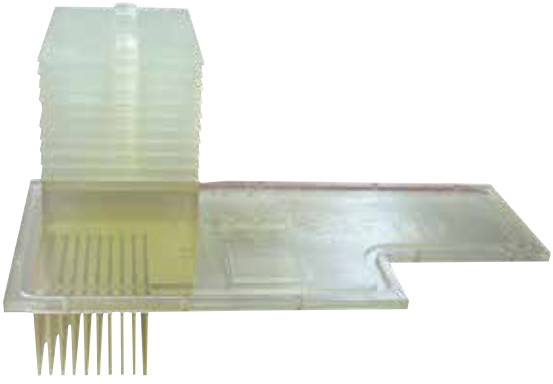
- Thermally resistant transparent prototypes
  - Hot or coolant fluid flow visualization
  - HVAC components
  - Under the hood testing
  - Internal structures visualization
  - Electronic controls prototypes
  - Wind tunnel models

BENEFITS

- Suitable for high temperature testing
- Translucent parts
- Stable mechanical properties over time
- Parts are strong and maintain shape
- Fast recoating and cleaning

FEATURES

- Temperature resistant up to 130 °C (266 °F)
- Rigid and stiff
- Resistant to common automotive fluids/oils
- Low viscosity formulation



3D SYSTEMS®

Accura® 48HTR

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Stereolithography (SLA)

A strong and rigid SLA plastic for applications that require high-heat resistance.

Post-Cured Material

MECHANICAL PROPERTIES		LARGE FRAME SLA PRINTERS				PROJET SLA PRINTERS[1]	
MEASUREMENT	CONDITION	METRIC (PCA ONLY)	METRIC (THERMAL PC[1])	U.S. (PCA ONLY)	U.S. (THERMAL PC[1])	METRIC	U.S.
Tensile Strength (MPa | PSI)	ASTM D 638	64-67		9280-9720		66	9570
Tensile Modulus (MPa | KSI)	ASTM D 638	2800-3980		406-577		3390	492
Elongation at Break	ASTM D 638	4-7 %				6 %	
Flexural Strength (MPa | PSI)	ASTM D 790	105-118		15200-17100		112	16240
Flexural Modulus (MPa | KSI)	ASTM D 790	2760-3400		400-493		3080	490
Impact Strength (J/m | Ft-lbs/in)	ASTM D 256	22-29		0.4-0.5		26	0.5
Heat Deflection Temperature @ 0.45 MPa (66 PSI) @ 1.82 MPa (264 PSI)	ASTM D 648	 65 °C 57 °C	 130 °C 110 °C	 149 °F 135 °F	 266 °F 230 °F	 65 / 130[2] °C 57 / 110[2] °C	 149 / 266[2] °F 135 / 230[2] °F
Coefficient of Thermal Expansion (CTE) (µm/m-°C / µm/in-°F)	ASTM E 831-93 TMA (T<Tg, < 50 °C) TMA (T<Tg, 9 > 120 °C)	 115 165		 64 92		 NA NA	 NA NA
Glass Transition (Tg)	DMA, E"	91-100 °C	132-136 °C	195-212 °F	270-277 °F	62 / 132[2] °C	144 / 270[2] °F
Hardness, Shore D		86				86	
Solid Density (g/cm³ | lbs/in³)	@ 25 °C (77 °F)	1.23		0.044		1.23	0.044

[1] Accura 48HTR was also previously marketed under the VisiJet® SL HiTemp name for the ProJet 6000 and 7000 printers
[2] After thermal postcure 2 hours at 160 °C

3D SYSTEMS®

www.3dsystems.com