

Accura[®] ClearVue[™]

Easy-to-process plastic with best-in-class clarity, high durability and water resistance for a multitude of applications



REDEFINING TRANSPARENCY FOR SLA

Utilized in a variety of demanding applications, 3D Systems Accura ClearVue for SLA is the most clear and colorless 3D printing material on the market. Formulated for ease-of-processing, exceptional detail and smooth surface finish, strength, durability and moisture resistance, it simulates the properties and appearance of Polycarbonate and ABS.

This unique combination of clarity, material properties and processing speed makes Accura ClearVue a high performing and cost-effective choice for aesthetic and functional prototypes used to improve product development efficiency of consumer goods, automotive, aerospace and medical components.

Liquid Material

| MEASUREMENT | CONDITION | VALUE |
|------------------------|-----------------|---|
| Viscosity | @ 30 °C (86 °F) | 235-260 cps |
| Penetration Depth (Dp) | | 6.1 mils |
| Critical Exposure (Ec) | | 9.5 mJ/cm ² |
| Color | | Clear / Transparent |
| Liquid Density | @ 25 °C (77 °F) | 1.10 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 [™] , SLA 5000 and SLA 7000 printers: | 10 kg standard bottle |

APPLICATIONS

- Models and prototypes requiring high clarity
 - Lighting and lenses
 - Fluid flow visualization models
 - Transparent assemblies
 - Packaging/bottles
- General purpose prototyping
- Medical models and devices (UPS Class VI capable)
- Master patterns for RTV molding
- QuickCast[™] patterns for investment casting
- Prototypes of conformal cooling molds
- Snap fits and complex assemblies

BENEFITS

- Best-in-class optical clarity
- Part stability and water tightness
- Applications versatility
- Beautiful transparent parts
- Ease-of-use and fast processing

FEATURES

- Highest clarity and transparency
- USP class VI capable
- Excellent humidity/moisture resistance
- Durable and strong
- High accuracy with exceptional detail and smooth surface finish

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Post-Cured Material

| MECHANICAL PROPERTIES | | LARGE FRAME SLA PRINTERS | | PROJET SLA PRINTERS ¹ | |
|--|--|--------------------------|-------------|----------------------------------|--------|
| MEASUREMENT | CONDITION | METRIC | U.S. | METRIC | U.S. |
| Tensile Strength (MPa PSI) | ASTM D 638 | 46-53 | 6700-7700 | 52 | 7540 |
| Tensile Modulus (MPa KSI) | ASTM D 638 | 2270-2640 | 329-383 | 2560 | 371 |
| Elongation at Break | ASTM D 638 | 3-15 % | | 6 % | |
| Flexural Strength (MPa PSI) | ASTM D 790 | 72-84 | 10400-12200 | 83 | 12040 |
| Flexural Modulus (MPa KSI) | ASTM D 790 | 1980-2310 | 287-335 | 2330 | 338 |
| Impact Strength (J/m Ft-lbs/in) | ASTM D 256 | 40-58 | 0.7-1.1 | 46 | 0.9 |
| Heat Deflection Temperature @ 0.45 MPa (66 PSI) @ 1.82 MPa (264 PSI) | ASTM D 648 | 51 °C | 124 °F | 51 °C | 124 °F |
| | | 50 °C | 122 °F | 50 °C | 122 °F |
| Coefficient of Thermal Expansion (CTE) (µm/m-°C µin/in-°F) | ASTM E 831-93 25-50 °C 50-100 °C | 122 | 68 | NA | NA |
| | | 155 | 86 | NA | NA |
| Glass Transition (Tg) | DMA, E'' | 62 °C | 144 °F | 70 °C | 158 °F |
| Hardness, Shore D | | 80 | | 85 | |
| Water Absorption | ASTM D 570-98 | 0.3 % | | 0.3 % | |
| Solid Density (g/cm ³ lbs/in ³) | @ 25 °C (77 °F) | 1.17 | 0.042 | 1.17 | 0.042 |

¹ Accura ClearVue was also previously marketed under the Visijet[®] SL Clear name for the Projet 6000 and 7000 printers

| OPTICAL PROPERTIES | | |
|---|---------------|--------|
| MEASUREMENT | CONDITION | VALUE |
| Haze @ 0.495 mm (0.195 in) | ASTM D1003-13 | 4.3 % |
| Luminous Transmittance @ 0.495 mm (0.195 in) | ASTM D1003-13 | 87.2 % |
| Diffuse Transmittance @ 0.495 mm (0.195 in) | ASTM D1003-13 | 3.8 % |
| Index of Refraction | ASTM D542-14 | 1.508 |
| L* | | 95.45 |
| a* | | -0.54 |
| b* | | 1.36 |

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