

Technical Data Sheet

SC 1000P

UV Light Curable, Investment Casting Resin



Version: 1.1

Product Description

SC 1000P is an improved investment casting pattern material that was custom formulated to take advantage of the latest, high throughput Stereolithography equipment. SC 1000P continues to offer the best in class performance characteristics such as low deformation due to shrink, strength, durability, water resistance, and MRI image clarity. SC 1000P is transparent with a natural yellow-green color that can be tinted or painted.

Advantages

- Thin walls and fine features
- Dimensional accuracy and stability
- Low ash on pattern burnout
- High casting yield
- Proven and validated across hundreds of foundries

Applications Recommendations

- Excellent for investment casting patterns
- Ideal for large, lightweight models utilizing ID-Light™/ SL

Typical Wet Properties

| Property | Test Method | Typical Value |
|-------------|-------------|------------------------|
| Viscosity | ASTM D1084 | 240 cps (30C) |
| Density | ASTM D1475 | 1.12 g/cm ³ |
| Appearance | Visual | Clear Liquid |
| Flash point | Closed cup | > 93 °C (200°F) |

Typical Cured Properties

| Property | Test Method | Typical Value |
|--|--------------|--------------------------|
| Color/Appearance | Visual | Transparent Yellow/Green |
| Density (as cured) | Measured | 1.16 g/cm ³ |
| Shore D Hardness | ASTM D2240 | 83 D |
| Deformation Due to Shrink | SDM | 0.30% |
| Tensile Strength | ASTM D638 | 53 MPa |
| Tensile Modulus | ASTM D638 | 2,668 MPa |
| Elongation at Break | ASTM D638 | 4 - 8% |
| Elongation at Yield (%) | ASTM D638 | - |
| Flexural Strength | ASTM D638 | 83 MPa |
| Flexural Modulus | ASTM D790 | 1,930 MPa |
| Impact Strength (Notched Izod) | ASTM D256 | 18.69 J/m |
| Heat Deflection Temperature @ 264 psi | ASTM D648 | 50°C |
| Heat Deflection Temperature @ 66 psi | ASTM D648 | 53°C |
| Coefficient of Thermal Expansion, 0 - 30°C | ASTM E831-93 | 102.7 µm/m-°C |
| Coefficient of Thermal Expansion, 90 - 150°C | ASTM E831-93 | 174.5 µm/m-°C |



Storage and Handling

- SC1000P has a maximum shelf life of twenty-four months if left in an unopened container and stored at 25°C.
- SC1000P is sensitive to UV/Visible light. Therefore, material should always be stored in tightly sealed, UV-resistant containers away from sunlight and under cool dry conditions.
- For industrial use only. Users should review Safety Data Sheet (SDS) prior to handling.

Disclaimer

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