

Somos Taurus Resin

INDUSTRIAL GRADE MATERIALS FOR SLA 3D PRINTING



MATERIAL NAME

Somos Taurus Resin

COLOR

Charcoal

PROCESS

SLA

PRODUCT DESCRIPTION

Somos Taurus Resin is an extremely durable and high temperature resistant stereolithography (SLA) material that allows expansion into new prototype and end-use applications. Its key benefits including superior strength and durability, excellent surface and large part accuracy, heat tolerance up to 90°C, thermoplastic-like performance, look and feel. This material is mainly used for functional prototypes, customized end-use parts, automotive parts, and low volume connectors for electronics.

TYPICAL APPLICATIONS

- Tough, functional prototypes
- Customized end-use parts
- Under the hood automotive parts
- Low volume connectors for electronics

PRODUCT SAFETY

After fully cured, the product is harmless to general skin contact. Very few people may have skin allergies to the resin. It cannot be used for food or medical purposes. If there is uncured resin in the product, you need to use gloves when touching it and avoid contact with the eyes.

PRODUCT DELIVERY & WAREHOUSING

- **STORAGE**

Store in a dry, cool, and dark environment, avoiding direct sunlight, high humidity, and extreme temperatures (ideal: 5°C–25°C).

Protect from prolonged UV exposure and seal properly to prevent environmental degradation.

- **TRANSPORTATION**

Ensure shockproof, pressure-resistant, and moisture-proof packaging to avoid cracking or deformation. Keep separated from strong acids, alkalis, and solvents during transportation.

- **USAGE**

Avoid exposure to strong UV light, high temperatures, or highly corrosive environments.

For outdoor applications, consider applying a UV-resistant coating to reduce aging or discoloration.

- **CHEMICAL COMPATIBILITY**

Preferred exposure: Weak acids, weak alkalis, and low-concentration alcohols (for short-term contact).

Avoid exposure: Strong acids, strong alkalis, oxidizing agents, and strong polar solvents (e.g., acetone, toluene).

PROPERTIES OF PRINTED MATERIAL

| Properties | Test Method | Value |
|--|----------------|--|
| Hardness | ASTM D2240-15 | Shore D 83 |
| Flexural modulus (Mpa) | ASTM D790-15e2 | UV Postcure: 2054 MPa UV & Thermal Postcure: 1724 MPa |
| Flexural strength (Mpa) | ASTM D790-15e2 | UV Postcure: 73.8 MPa UV & Thermal Postcure: 62.7 MPa |
| Tensile modulus (Mpa) | ASTM D638-14 | UV Postcure: 2310 MPa UV & Thermal Postcure: 2206 MPa |
| Tensile strength (Mpa) | ASTM D638-14 | UV Postcure: 46.9 MPa UV & Thermal Postcure: 49 MPa |
| Elongation at break | ASTM D638-14 | UV Postcure: 24% UV & Thermal Postcure: 17% |
| Poisson's Ratio | / | / |
| Impact strength notched Izod (J/m) | ASTM D256-10e1 | UV Postcure: 47.5 J/m UV & Thermal Postcure: 35.8 J/m |
| Heat deflection temperature (°C) | ASTM D648-16 | HDT @0.46 MPa (66psi): 62°C (UV Postcure); 91°C (UV & Thermal Postcure) HDT @1.81 MPa (264psi): 50°C (UV Postcure); 73°C (UV & Thermal Postcure) |
| Glass transition, Tg (°C) | ASTM D3418-15 | UV Postcure: 53°C UV & Thermal Postcure: 54°C |
| Coefficient of thermal expansion (/°C) | ASTM E831-14 | C.T.E. -40~0°C: 76.5 µm/m°C (UV Postcure); 71.4 µm/m°C (UV & Thermal Postcure) C.T.E. 0~50°C: 105.3 µm/m°C (UV Postcure); 103.4 µm/m°C (UV & Thermal Postcure) C.T.E. 50~100°C: 151.9 µm/m°C (UV Postcure); 157.5 µm/m°C (UV & Thermal Postcure) C.T.E. 100~150°C: 171.4 µm/m°C (UV Postcure); 173.4 µm/m°C (UV & Thermal Postcure) |
| Density (g/cm³) | / | ~1.10 g/cm³ @25°C |
| Dielectric Constant 60 Hz | ASTM D 150-11 | UV Postcure: 4.6 UV & Thermal Postcure: 4.8 |
| Dielectric Constant 1kHz | ASTM D 150-11 | UV Postcure: 4.2 UV & Thermal Postcure: 4.4 |
| Dielectric Constant 1MHz | ASTM D 150-11 | UV Postcure: 3.7 UV & Thermal Postcure: 3.5 |
| Dielectric Strength kV/mm | ASTM D 150-11 | UV Postcure: 17.7 kV/mm UV & Thermal Postcure: 17.3 kV/mm |

Tips: Want to explore a wider range of materials? Check out <https://www.unionfab.com/materials>



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Email: hello@unionfab.com