

Standard Resin(Black)

INDUSTRIAL GRADE MATERIALS FOR SLA 3D PRINTING



MATERIAL NAME

Standard Resin(Black)

COLOR

Black

PROCESS

SLA

PRODUCT DESCRIPTION

Standard Resin(Black) is pure black material, with good toughness, accurate scale, and good surface details. The product accuracy is $\pm 0.1\text{mm}$ within 100mm and $\pm 0.1\%$ beyond 100mm.

TYPICAL APPLICATIONS

- Parts and prototypes for functional testing applications
- Sales, marketing and exhibition models
- Fine-detail models with smooth surfaces
- Cases, holders, adapters and large models

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	Shore D 79
Flexural modulus (Mpa)	ASTM D790	2067 MPa
Flexural strength (Mpa)	ASTM D790	58.5 MPa
Tensile modulus (Mpa)	ASTM D638	2250 MPa
Tensile strength (Mpa)	ASTM D638	45.2 MPa
Elongation at break	ASTM D638	14%
Poisson's Ratio	/	/
Impact strength notched Izod (J/m)	ASTM D256	23.7 J/m
Heat deflection temperature (°C)	ASTM D648	HDT @0.455 MPa: 48.9°C HDT @1.81 MPa: 44°C
Glass transition, Tg (°C)	/	/
Coefficient of thermal expansion (/°C)	/	/
Density (g/cm ³)	/	/

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

