Black Resin Description

Black Resin is the Somos low-viscosity photosensitive resin material introduced by us from Covestro (formerly Royal DSM). Due to its high smoothness, excellent dimensional stability, strong chemical resistance, and stable performance, it has been widely trusted and recognized by customers, and its properties are similar to engineering plastics such as ABS and PBT.

Advantages

Smooth surface with high precision, waterproof and moisture-proof, fast delivery cycle, and high cost-performance ratio. The material boasts a pure black color, eliminating the need for painting. It offers high printing accuracy, smooth surface, excellent detail representation, and good dimensional stability. In addition, it remains resistant to softening in summer, has strong chemical resistance, and is suitable for hand model products, products with paint-free requirement, products requiring high precision, and products for use in high-humidity environments.

Disadvantages

Slightly lower strength and toughness compared to nylon

Tolerance change over time

3 days: 150 μm or 0.15%; 7 days: 200 μm or 0.20%; 15 days: 250 μm or 0.25%

Accuracy: 200 μm

Parameters

Tensile Modulus (ASTM Method D648): 2500
Tensile Strength (ASTM Method D638): 50
Elongation at Break (ASTM Method D638): 5-10%
Flexural Modulus (ASTM Method D2240): 2290
Izod Impact Strength - Notched (ASTM Method D256A): 24J/m
Heat Deflection Temperature at 0.46 MPa (ASTM Method D648): 50°C

Applications

● Structural and appearance verification of household appliances Air conditioners, air purifiers, vacuum cleaners, electric fans, garment steamers, water dispensers, juicers, hair dryers, etc.
● Structural and appearance verification of automotive parts and accessories Rearview mirrors, dashboards, steering wheels, lights, seats, and handles navigation systems, dash cams, car vacuum cleaners, parking sensors, etc.
● Structural and appearance verification of digital electronic products Laptops, tablets, smartphones, digital cameras, game consoles, speakers, MP3 players, power banks, etc.
● Structural and appearance verification of electromechanical equipment Industrial display panels, cameras, switches, sockets, power tools, electrical instruments, laboratory apparatus, measuring tools, etc.
● Biomedical devices This material has been certified by USP Class VI and ISO 10993 and can also be used for certain biomedical, dental, and skin-contact applications