

Proto Plus

Material Introduction



Introduction

Proto Plus is photosensitive resin material which has accurate and durable features. It is designed for use on solid state SLA additive manufacturing platforms. It has good and smooth surface finishing, good toughness, not easy to break, suitable for product verification, functional prototypes, master patterns, concept models, general parts in automotive, medical and consumer electronics industries. Parts made with Proto Plus resin have a durability of more than 6.5 months.



Advantages

White colour (slightly yellowish) and smooth surface finishing. This material could produce accurate parts with high feature detail especially high quality controls of vacuum casting parts, excellent toughness among similar materials. It is suitable for accurate and high tough parts with an improved dimensional stability.

Disadvantage

If wall thickness is less than 1.5mm, model will become soft and easy to deform, and the dimensional accuracy is average. Model printed looks a bit yellowish.

Tolerance

200 μ m or 0.2%

Recommendation

Product printed by this material is white in colour, with good and smooth surface and high in toughness. This material has high cost performance, a good substitute of most resins.

Attention >

Proto Plus has good and smooth surface finishing, white colour, good toughness, not easy to break, suitable for product verification and functional prototypes. If wall thickness is less than 1.5mm, model will become soft and easy to deform, and the dimensional accuracy is average.

Attributes

Hardness (Shore D) (ASTM D 2240): 76~88
Flexural modulus (ASTM D 790): 2,692-2,775Mpa
Flexural strength (ASTM D 790): 69- 74 MPa
Tensile modulus (ASTM D 638): 2,589-2,695 MPa
Tensile strength (ASTM D 638): 38-56 MPa
Elongation at break (ASTM D 638): 12 -20%
Poisson`s Ratio (ASTM D 638): 0.4-0.44
Impact strength notched izod (ASTM D 256): 35 - 55J/m
Heat deflection temperature (ASTM D 648 @66PSI) : : 39~52 °C
Glass transition,Tg(DMA, E"peak): 40~57 °C
Coefficient of thermal expansion TMA(T<Tg): 90~103*E-6 °C
Dielectric Constant 60 Hz (ASTM D 150-98): 4.2~5.0
Dielectric Constant 1 KHz (ASTM D 150-98): 3.3~4.2
Dielectric Constant 1 MHz (ASTM D 150-98): 3.2~4.0
Dielectric Strength (ASTM D 1549-97a): 12.8~16.1 kV/mm

Applications

- > Structure and appearance verification of auto parts and supplies:
Rear-view mirrors, dashboards, steering wheels, lights, seats and handles, and other auto accessories.
- > Structural and appearance verification of household appliance:
Air conditioner, air purifier, vacuum cleaner, electric fan, ironing machine, water dispenser, juicer, hair dryer.

➤ Medical products

Various medical auxiliary model, medical teaching model, etc.

➤ Mechanical and electrical equipment structure and appearance verification

Industrial display panels, cameras, switches, sockets, power tools, electrical instruments, experimental instruments, measuring tools, etc.

➤ All kinds of parts

Suitable to be used for do prototype of parts.