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Technical Data Sheet

SolFlex Tech Tough

Components
Urethane – Acrylate high reactive Photopolymer

Product Description
SolFlex Tech Tough is a medium-viscous, highly reactive photopolymer for stereolithography applications resulting in tough multipurpose parts. It can be used to produce high performance functional parts by using digital light processing (DLP) 3D printers.
High impact strength, high E-modulus, and good heat deflection temperature are the key features of SolFlex Tech Tough. These properties ensure an adequate quality of tough and complex 3D printed parts. SolFlex Tech Tough can fulfill the requirements of functional applications regarding high accuracy and mechanical strength.

Delivery form and warehousing
SolFlex Tech Tough was developed for UV light sources like UV LEDs. It is also sensitive to sunlight or intense daylight and should be handled accordingly, e.g. with light exclusion before application in the printing system. Store the photopolymer in an opaque container at room temperature. If stored under the mentioned conditions, the photopolymer should be used for max. 12 months. For further instructions, please refer to the safety data sheet.

Product safety
Mandatory and recommended industrial hygiene procedures and the relevant industrial safety precautions must be followed whenever this product is being handled and processed. Product is sensitive to humid environment conditions. For additional information please consult the corresponding material safety data sheets.

For your information
SolFlex Tech Tough is currently available in transparent. Material is not FDA conform.

Notice

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GENERAL PROPERTIES	Test Method	Values
Critical Exposure, E_c		3.9 mJ/cm^2
Depth of Penetration, D_p		9.6 mils
Density	ISO 2811-3	1.12 g/cm^3 / 69.9 lb/ft3
Viscosity (at 30 °C)	Cone/plate rheometer [1]	220 - 260 mPas
Viscosity (at 50 °C)		77 - 97 mPas

MECHANICAL PROPERTIES	Test Method	Values
Tensile Strength	ISO 527-2	49 - 62 MPa / 7.1 - 9 ksi
Tensile Modulus	ISO 527-2	1800 - 2270 MPa / 261 - 329 ksi
Tensile Elongation @ break	ISO 527-2	15 - 18 %
Shore D Hardness	ASTM D2240	75 - 85
H Test Shrinkage	N/A	0.71 - 0.77 %
Impact Strength Izod (notched)	ISO 180	3.5 - 4.8 kJ/m2

THERMAL PROPERTIES	Test Method	Values
HDT B (0.45 MPa)	ISO 75-2	55 - 59 °C / 131 - 138 °F
Vicat Softening Temperature B (50 N)	ISO 306:2013	58.4 - 60.4 °C / 137 - 141 °F
Glass Transition Temperature, T_g		86 - 89 °C

[1] Determined with TA-Instrument DHR rheometer, cone/plate, diameter 60 mm, shear rate 100 s^{-1}

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