



We create chemistry



Ultracur3D ST 45 / ST45 M

BASF Reactive Urethane Photopolymer
for Tough Applications

Ultracur3D ST 45 (Tough product line) 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 stereolithography (SLA), digital light processing (DLP) or Liquid Crystal Display (LCD) machines. Ultracur3D ST 45 can fulfill the requirements of functional applications regarding high accuracy and mechanical strength, where existing 3D printing materials often show limitations.

Example Applications



Performance
prototypes



Functional
end-use parts



Fluid flow models

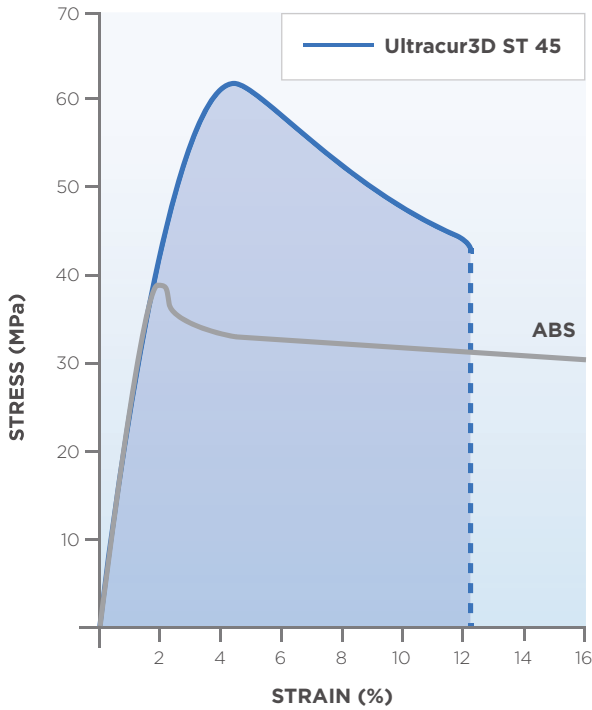


Generic
Connector



Car interior

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Material Properties	Norm	Typical values
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Tensile

E-modulus	ASTM D638	2460 MPa
Tensile Strength at yield		60 MPa
Elongation at Yield		5 %
Ultimate Tensile Strength		42 MPa
Elongation @ break		11 %

Flexural

Flexural Modulus	ASTM D790	1590 MPa
Flexural Strength @ 5% Strain		93 MPa

Impact

Notched Izod 23 °C	ASTM D256	36 J/m
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Thermal

HDT @ 0.45	ASTM D648	59 °C
HDT @ 1.82		53 °C

Hardness

Shore D	ASTM D2240	80
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General

Viscosity @ 30 °C	250 mPas
Viscosity @ 50 °C	90 mPas

Ultracur3D ST 45 / ST45 M



Faster post-curing -
no thermal
treatment needed



High impact strength



High E modulus



Wide UV-long-term
stability of printed parts