



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

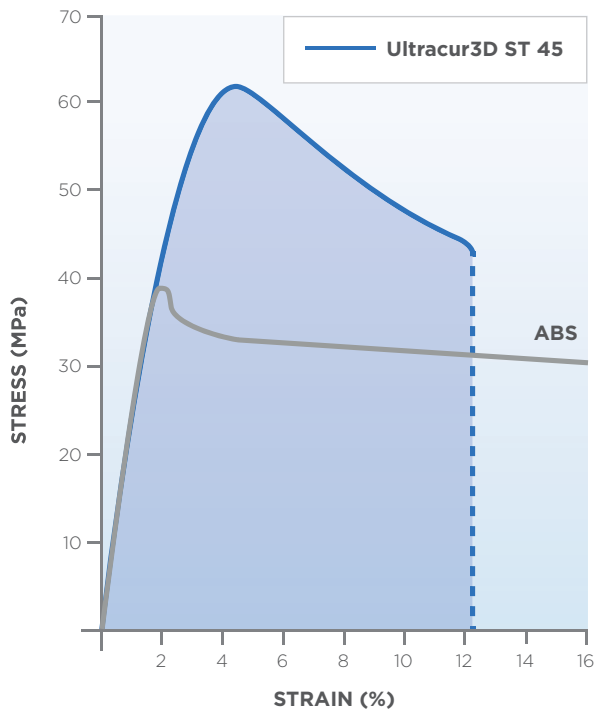


Car interior

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Material Properties	Norm	Typical values
Tensile		
E-modulus	ASTM D638	2460 MPa
Tensile Strength at yield		60 MPa
Elongation at Yield		5 %
Ultimate Tensile Strength		42 MPa
Elogation @ 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
Thermal		
HDT @ 0.45	ASTM D648	59 °C
HDT @ 1.82		53 °C
Hardness		
Shore D	ASTM D2240	80
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