

### SM442 Durable Material

#### General Information

SM442 is formulated to work with DLP and SLA 3D printers using 385-405 nm light. It is specifically tuned to print on the Autodesk Ember printer. SM442 will extend the window lifetime of the Ember and other printers that use PDMS windows. This resin is recommended for applications where good elongation and moderate modulus are required. SM442 is offered in black.

#### Chemical Data

Viscosity (cps @25 °C)	2000		Method
	Fresh Print	Post-cured	Brookfield SP #31
<b>Tensile Modulus</b> (mPa)	20	400	ASTM D 638-14
<b>Tensile Strength</b> (mPa)	4	17	ASTM D 638-14
<b>Elongation</b> (%)	60	80	ASTM D 638-14

\*Parts were post-cured for 10min a side with a broad spectrum UV light at 30mW/cm2.

\*Properties may vary in orientation and post-treatment.

#### Recommended Ember Print Parameters for 50 µm

##### First layer

Wait before exposure	15 s
Exposure	8 s
Separation and approach velocity	4 rpm

##### Burn in layer

Wait before exposure	10 s
Exposure	4s
Separation and approach velocity	4 rpm

##### Model layer

Wait before exposure	3 s
Exposure	2.2 s
Separation and approach velocity	7 rpm

Print parameters might require modification based on the geometry of the printed part.

## **Post Cure Procedure**

Parts should be post cured under a broad band, UV light for 10 minutes on a side at 30 mW/cm<sup>2</sup> to bring the parts up to their full properties.

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