

# EM 1K

## High Elastic Resin

EM 1K is a fast-printing single component elastomer with high elongation and resilience. It has excellent fatigue property as well as tear strength to be used for both prototyping and end products.

ISO Standard	Tested Property	Test Result
EU REACH Regulation No. 1907/2006 211	Substances of Very High Concern (SVHC)	Pass
ISO 10993-10:2010	Irritation and Skin Sensitization	Pass
AFIRM RSL	Restricted Substances	Pass
California Rule 65	Chemicals that cause cancer, birth defects or other reproductive harm	Pass



Black



Energy Return



Tear resistance



Elastomer

## EM 1K Technical Data Sheet:

Mechanical Properties	Metric	U.S.
Ultimate Tensile Strength, ISO 37, Type II, 500 mm/min	11.49 MPa	1.67 ksi
Elongation at Break, ISO 37, Type II, 500 mm/min	383 %	383 %
Tensile modulus, ISO 37, Type II, 500 mm/min	10.08 MPa	1.46 ksi
Tear Strength, ASTM D624, Die C, 500 mm/min	26.84 kN/m	153.26 lbf/in
Tear Strength, ASTM D624, Die T, 50 mm/min	4.95 kN/m	28.27 lbf/in
Rebound Resilience, ISO 4662	48 %	48 %
Ross Flexing Fatigue (Notched), ASTM D1052 23 °C, 90 degree bending, 100 cycles/minute	> 250,000	> 250,000
Thermal Properties	Metric	U.S.
Tg (DMA, tan(d)), ASTM D4065	-48.62 °C	-55.51 °F
Storage modulus (25 °C), ASTM D4065	30.30 MPa	4.39 ksi
tan δ, 25 °C, (DMA), ASTM D4065	0.10	0.10
General Properties	Metric	
Hardness, Shore A, ASTM D2240	75A	
Density (cured resin), ASTM D792	1.08 g/cm <sup>3</sup>	
Density (liquid resin), ASTM D4052	1.04 g/cm <sup>3</sup>	
Viscosity, 40 °C, ASTM D2196	5500 cps	
Viscosity, 25 °C, ASTM D2196	12900 cps	

The above TDS data is tested and verified in LuxCreo's 3D printing system. The mechanical properties of the material may vary based on print orientation, print settings and the choice of post-process technology. Please refer to LuxCreo's material "Application Guide" and "EM Design Guide" or consult aftersales to choose a suitable process. Improper use of materials or non-compliance with material "Application Guide" or "EM Design Guide" may result in changes in mechanical properties and colors. LuxCreo reserves the right to change material properties and formulations without notice.