ULM™ 17220 Black

An ultra low modulus stereolithography material with rubber-like properties

Description

The low durometer Somos® ULM™ 17220 has a 70 Shore A hardness and is ideal for applications where toughness and flexibility are important.

Application

DSM Somos® ULM™ 17220 provides highly elastic properties necessary to produce functional prototypes of seals, gaskets, hoses, keypads, and grips. Prototypes realized in Somos ULM™ stereolithography resins will allow the RP industry to capitalize on the benefits of stereolithography, including enhanced accuracy and surface finish, in applications traditionally reserved for selective laser sintering or silicone molding of flexible urethanes.

Physical Properties

Appearance	Black
Viscosity	~3400 cps at 30°C
Density	~1.07 g/cm^3 at 23°C (liquid)
	~1.12 g/cm^3 (solid)

Optical Properties at 355 nm

D_p	0.130 mm (~0.0051 inch) *[slope of cure-depth vs. ln(E) curve]*
E_c	3.69 mJ/cm^2 *[critical exposure]*
E_{10}	26 mJ/cm^2 *[exposure that gives 0.254 mm (.010 inch) thickness]*

DSM Somos®
1122 St. Charles Street
Elgin, IL 60120 USA
Tel: 800.223.7191 (in USA)
Tel: 847.697.0400 (outside USA)
Fax: 847.468.7785

DSM Desotech bv
3150 AB Hoek van Holland
The Netherlands
Tel: +31 1743.15391
Fax: +31 1743.15530

www.dsmsomos.com

Email:
Americas@dsmsomos.info
Europe@dsmsomos.info
Asia@dsmsomos.info

Physical Properties (Metric)

The numbers reported below are typical values. The actual values may vary with build conditions. These properties were achieved on a 3D Systems Viper si² with a 6 mil layer using an EXACT style.

ASTM Test	Description	Somos® ULM™ 17220 Black
D638M	Tensile Strength at Break	3.47 MPa
	Elongation at Break	75 %
D790M	Dielectric Strength	13.6 kV/mm
	Dielectric Constant	5.32 @ 60Hz 4.78 @ 1KHz 3.57 @ 1MHz
D2240	Hardness (Shore A)	70
D256A	Water Absorption	1.15%
D648	Tear Strength (Graves)	406.3 N/m

N/A: Not Available

Physical Properties (Imperial)

The numbers reported below are typical values. The actual values may vary with build conditions. These properties were achieved on a 3D Systems Viper si² with a 6 mil layer using an EXACT style.

ASTM Test	Description	Somos® ULM™ 17220 Black
D638M	Tensile Strength at Break	503 psi
	Elongation at Break	75%
D790M	Dielectric Strength	345 V/mil
	Dielectric Constant	5.32@ 60Hz 4.78@ 1KHz 3.57@ 1MHz
D2240	Hardness (Shore A)	70
D256A	Water Absorption	1.15%
D648	Tear Strength (Graves)	45.9 lbf/in

N/A: Not Available