

# ProtoCAM

*Excellence in Rapid Prototyping*

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## *Somos 201 and Somos 201 Infiltrated Properties*

Measurement	Test Method	Value Somos 201	Value Somos 201 Infiltrated
<b>General Properties</b>			
Specific Gravity (20°C)	ASTM D792	0.91	1.07
Powder Density (Tap)	ASTM D4164	0.58 g/cm <sup>3</sup>	
Average Particle Size	Laser Diffraction	93 µm	
Particle Size Range (90%)	Laser Diffraction	23-190 µm	
<b>Thermal Properties</b>			
Melting Point (T <sub>m</sub> )	DSC	156 °C	
<b>Mechanical Properties</b>			
Tensile Modulus	ASTM D638	15.5 MPa	17.3 MPa
Tensile Elongation at Break	ASTM D638	1.1	1.3
Stress at 5% strain	ASTM D638	1.8 MPa	2.2 MPa
Stress at 10% strain	ASTM D638	2.0 MPa	2.6 MPa
Flexural Modulus			
at -40°C	ASTM D790	23 MPa	37.3 MPa
at 23°C	ASTM D790	13.4 MPa	14.1 MPa
at 100°C	ASTM D790	3 MPa	7 MPa
Initial Tear Resistance			
Die C at 23°C	ASTM D624	6 kN/m	23.1 kN/m
Die C at 100°C	ASTM D624	5.2 kN/m	6 kN/m
Abrasion Resistance			
Taber, CS-17 wheel, 1kg load	ASTM D4060	520 mg/1000 cycles	0.3 mg/1000 cycles
Taber, H-18 wheel, 1kg load	ASTM D4060	870 mg/1000 cycles	0.5 mg/1000 cycles
Bursting Strength (Straight)	ASTM D380	0 kPa	>160 kPa
23°C, 25mm ID x 2mm thick x 300 mm long hose			
Shore A Hardness at 23°C	ASTM D2240	74	75
<b>Electrical Properties</b>			
Volume Resistivity*	ASTM D257-93	1.5e13 ohm x cm	
Surface Resistivity*	ASTM D257-93	1.9e13 ohm x cm	
Dielectric Constant**	ASTM D150-95	2.9	
Dielectric Strength	ASTM D149-95a Method A	4.1e3 v/mm	
Comparative Tracking Index	ASTM D5288-92 or IEC Standard 112	315 V, Ti-Cu <1mm depth	

\* (22°C, 50% RH, 500V)

\*\* (22°C, 50% RH, 5V 1000Hz)

\*\*\* (22°C, 50% RH, under oil, 500 V/sec)