



- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: VESPEL® SP-211 | 10% Teflon® resin and 15% graphite Polyimide

VESPEL® SP-211 has 10% Teflon® resin and 15% graphite added to the base resin to allow for the lowest of friction. It offers excellent wear resistance up to 300°F.

These are machined properties and are non-directional

Physical Properties	Test Method ASTM	Value	Units
Density	D-792	1.55	lb/in ³
Water Absorption 24hrs. @73°F	D-570		%
Mechanical Properties			
Hardness, Rockwell E	D-785	E1-20	
Tensile Strength Ultimate @ 73°F	D-1708	6,500	psi
Tensile Strength Ultimate @ 500°F	D-1708	3,500	psi
Flexural Modulus @ 73°F	D-790	450	10 ³ psi
Flexural Modulus @ 500°F	D-790	200	10 ³ psi
Flexural Strength Ultimate @ 73°F	D-790	10,000	psi
Flexural Strength Ultimate @ 500°F	D-790	5,000	psi
Compressive Stress @ 73°F 1% Strain	D-695	3,000	psi
Izod Impact, Notched @ 73°	D-256		ft-lb/in
Izod Impact, Unnotched @ 73°F	D-256		ft-lb/in
Electrical Properties			
Dielectric Constant @73°F 10 ² Hz	D-150		
Dielectric Strength Short Time 80 mils thick 73°F	D-149		Volts/mil
Dissipation Factor @ 73°F 10 ² Hz	D-150		
Arc Resistance			sec
Thermal Properties			
CTE 73°F - 572°F	E-228	30	10 ⁻⁶ in/in/°F
CTE - 80°F - 73°F	E-228		10 ⁻⁶ in/in/°F
Thermal Conductivity	E-228	5.3	BTU-in/hr-ft ² °F
Maximum Service Temperature, Air			°F
Flammability, UL94			

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*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufacturers, converters and other published sources. However, they should not be used for specification or design purposes.