

## Product Information

### ESC-comp™ V-100, V-131A, V-333A, V-111 Laminate Composite Compounds

Property	Test Method	Units	V-131A	V-333A	V-100	V-111
			COMPOSITE MATERIAL	COMPOSITE MATERIAL	COMPOSITE MATERIAL	COMPOSITE MATERIAL
			Value	Value	Value	Value
Tensile Strength	<b>ASTM D638</b>	<b>MPa (psi)</b>	<b>75 (11,000)</b>	<b>75 (11,000)</b>	<b>(7,800-8,300)</b>	<b>(7,800-8,300)</b>
Tensile Elongation	ASTM D638	%				
Tensile Modulus	ASTM D638	MPa (psi)				
Flexural Strength	ASTM D790	MPa (psi)				
Flexural Modulus	ASTM D638	Map (psi)	3,240 (470,000)	3,240 (470,000)	(480,000)	(480,000)
Shear Strength	ASTM D2344	psi	83 (12,000)	83 (12,000)	83 (12,000)	83 (12,000)
Compressive Strength	<b>ASTM D695</b>	<b>MPa (psi)</b>				
Normal to laminate	<b>ASTM D695</b>	<b>psi</b>	<b>345 (50,000)</b>	<b>345 (50,000)</b>	<b>345 (50,000)</b>	<b>345 (50,000)</b>
Parallel to laminate	<b>ASTM D695</b>	<b>psi</b>	<b>93 (13,500)</b>	<b>93 (13,500)</b>	<b>(14,500)</b>	<b>(14,500)</b>
Impact Strength		MPa (psi)				
Notched 1/8"	ASTM D256	J/m (ft-lb/in)				
Un-notched 1/8"	ASTM D256	J/m (ft-lb/in)				
Hardness, Rockwell	ASTM D785	R	M100	M100	M100	M100
Specific Gravity	ASTM D792		.047 lb./in sq.	.047 lb./in sq.	.048 lb./in sq.	.048 lb./in sq.
Water Absorption 24 hrs. @ 73 F (23 C)	<b>ASTM D570</b>	<b>%</b>	<b>&lt;0.1</b>	<b>&lt;0.15</b>	<b>&lt;0.1</b>	<b>&lt;0.1</b>
Coefficient of Friction DRY (Dynamic)			0.15-0.2	0.15-0.2	.12-.17	.12-.17
Deflection Temperature C (F)						
@264 psi (1.8 Map)	ASTM D648	C (F)				
@66 psi (0.45Mpa)	ASTM D648	C (F)				
Coefficient of Linear Thermal Expansion						
Parallel to Laminate		in/in/F	.000035	.00002	.000035	.000035
Normal to Laminate		in/in/F	.000018	.00004	.000018	.000018
FILLER			Polyester / Polyester Fabric / PTFE	Vinyl Ester / Nomex® / PTFE	Polyester / Polyester Fabric / Special Lub.	Polyester / Polyester Fabric / Graphite Lub.
Operating Temperatures			-40F to +200F	-40F to +400F	-40F to +200F	-40F to +200F
Color			Pearl	Pearl	Red or Aqua	Gray

The information provided in this data sheet corresponds to our knowledge on the subject at the date of this publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such materials used in combination with any other material, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specifications limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to do to determine the suitability of a specific compound for your particular purpose. Since Engineered Seals, LLC cannot anticipate all variation in actual end-use conditions ESC makes no warranties and assumes no liability in connection with any use of this information. Caution: Do not use this product in medical application involving permanent implantation in the human body.

\*We highly recommend testing in your specific application, this is a guide only

