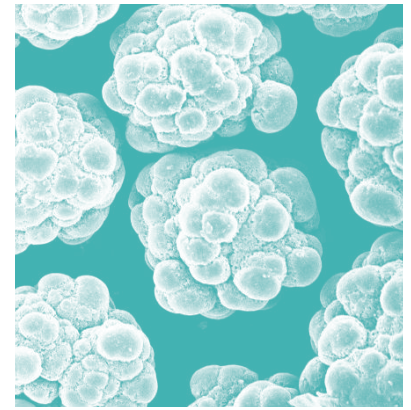


# Ekonol® Case Study #8:



## Typical Electrical Properties

The table below shows typical electrical properties of PTFE, Ekonol®/PTFE and glass filled PTFE. Ekonol® polyester by itself is an excellent insulating material and this is reflected in the electrical properties of the blend with PTFE. The dissipation factors are particularly good for this blend, being only slightly higher than for unfilled PTFE. Traditionally, glass-filled PTFE has been used for application(s) where a combination of electrical and mechanical properties was required. The Ekonol® filled material offers a combination of very good insulating characteristics with extremely low wear.

### ELECTRICAL PROPERTIES

Property	ASTM Test Method	Control Material PTFE*	25% Ekonol® in PTFE	25% Fiber Glass Filled* PTFE
Dielectric Constant	D150-54T			
60 cps		2.1	2.19	2.63
10 <sup>6</sup> cps		2.1	2.22	2.85
Dissipation Factor	D150-54T			
60 Hz		0.0003	0.0007	0.0718
10 <sup>6</sup> Hz		0.0003	0.0005	0.0028
Volume Resistivity	D257-57T			
ohm-cm		1 x 10 <sup>17</sup>	> 1 x 10 <sup>15</sup>	1 x 10 <sup>13</sup>
Surface Resistivity	D257-57T			
ohm-cm		1 x 10 <sup>15</sup>	> 1 x 10 <sup>16</sup>	1 x 10 <sup>16</sup>
Arc Resistance	D495			
Seconds-Tungsten			181	
Rod Method				
Dielectric Strength**	D149	350	310	300
v/mil				

\* Typical published values (insert at Tr)

\*\* 0.25" (6.35 mm) thick sample