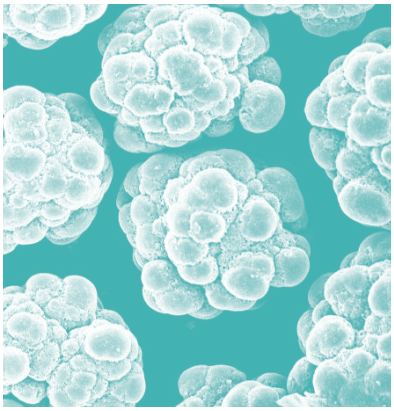
Ekonol®
Case Study #9:



Typical Physical Properties of Ekonol®

The typical physical properties for 25% Ekonol® in PTFE, 20% glass in PTFE, and 100% PTFE are shown in the table to the right. The physical properties are generally comparable to those properties found in other filled PTFE compositions.

TYPICAL PHYSICAL PROPERTIES

Property	25% Ekonol® in PTFE	20% Fiber Glass Filled PTFE	100% PTFE
Density (g/cm3)	1.86	2.24	2.17
Tensile Strength (psi) (MPa)	1800 (12.4)	3800 (26.2)	5700 (39.3)
Strain (%)	180	325	450
Shrinkage	3	2.9	3.3
Hardness - Shore D	63	60	57
Compression Strength (psi)			
0.2% Offset	1525	1375	1175
At 1% Strain	1275	1200	775
At 25% Strain	4700	4325	4325
Compression Modulus (psi)	13.9×10^4	13.6×10^4	8.1×10^4
Creep (75°F)24° C, 2000 psi (13.8 MPa), 24 hr.)	2.6%	8.5%	9.5%
Creep (212° F)(100° C, 1000 psi, 24 hr.)	1.2%	3.6%	4.8%
Total Creep (24° C, 2000 psi (6.9 MPa), 24 hr.)	6.5%	12.4%	15.2%
Total Creep (24° C, 2000 psi (6.9 MPa), 24 hr.)	5.4%	8.6%	14.4%
Permanent Creep (24° C, 2000 psi (6.9 MPa), 24 hr.)	3.0%	6.7%	7.0%
Permanent Creep (24° C, 2000 psi (6.9 MPa), 24 hr.)	1.6%	3.5%	4.6%
Coefficient of			
Thermal Expansion (1/° C)	7.5×10^{-5}	7.2×10^{-5}	11.0×10^{-5}
(25° C - 100° C)	8.4×10^{-5}	10.5×10^{-5}	11.9×10^{-5}
Thermal Conductivity (Kcal/m/hr/° C)	0.54	0.30	0.20