APICAL®

PROPERTY OVERVIEW

KEY PROPERTY OVERVIEW

		Construction			Mechanical Properties						Thermal Properties						Electrical Properties				Physical Properties				
	Nominal Thickness	FEP	AV	FEP	Tensile Strength		Tensile Modulus		Elongation		Heat shrinkage		Coefficient of Thermal Expansion		Heat Seal Strength		Dielectric Strength	Dielectric Constant	Dissipation Factor	Volume Resistivity	Water Absorption	Coefficient of Humidity Expansion	Density	Yield	Applications-Special Features
					MD	TD	MD	TD	MD	TD	MD	TD	MD	TD	FEP-FEP	FEP-PI									
	Mils	Mils	Mils	Mils	kpsi	kpsi	kpsi	kpsi	%	%	%	%	ppm/dC	ppm/dC	g/Inch	g/Inch	kV/mil	1kHz	1kHz	Ohm-cm	%	ppm/%RH	g/cm^3	ft^2/lb	
	Microns	Microns	Microns	Microns	MPa	MPa	GPa	GPa							g/cm	g/cm								m^2/kg	
					D882	D882	D882	D882	D882	D882	200 dC - 2 HOURS		TMA 100 - 200 dC		350dC,20sec,20 psi		D149	D150	D150	D257	PGTM-650-2.8.1	HMA	D1505		
50 AV	0.50	-	0.50	-	4	4	400	410	104	100	0.09	0.02	32	31	-	-	9.5	3	0.0030	>1E+16	1.5	16	1.42	267	
	12.7	-	12.7	-	293	299	2.8	2.8							-	-								55	
75 AV	0.75	-	0.75	-	4	4	425	430	110	106	0.08	0.01	32	31	-	-	9.5	3.1	0.0023	>1E+16	2.0	16	1.42	175	
	19	-	19.0	-	274	281	2.9	3.0							-	-								36	AV Apical
100AV	1.00	-	1.00	-	4	4	435	450	111	107	0.06	0.01	32	31	-	-	8.6	3.2	0.0021	>1E+16	2.3	16	1.42	133	Polyimide Films
	25.4	-	25.4	-	278	288	3.0	3.1							-	-								27	
200AV	2.00	-	2.00	-	3	3	330	340	115	111	0.05	0.03	32	31	-	-	6.3	3.2	0.0021	>1E+16	2.7	16	1.42	68	
	50.8	-	50.8	-	244	257	2.3	2.3							-	-								14	
300AV	3.00	-	3.00	-	3	3	300	315	104	101	0.05	0.04	32	31	-	-	5.1	3.2	0.0019	>1E+16	2.7	16	1.42	47	
	76.2	-	76.2	-	213	223	2.1	2.2							-	-								9	
500AV	4.92	-	4.92	-	3	3	420	428	105	99	0.07	0.03	32	31	-	-	3.8	3.2	0.0019	>1E+16	2.7	16	1.42	27	
	125	-	125	-	233	246	2.9	3.0							-	-								6	
120AF616	1.20	0.10	1.00	0.10	35	36	405	410	116	113	0.09	0.03	-	-	1134	-	6.9	3.1	0.0014	>1E+16	2.1	9	1.53	106	
	30.5	2.5	25.4	2.5	239	245	2.8	2.8							446	-								22	AF Apical Films
120AF616B	1.30	0.15	1.00	0.15	32	33	370	375	113	115	0.09	0.02	-	-	1325	-	6.6	3.1	0.0014	>1E+16	2.0	9	1.59	93	with
	33.0	3.8	25.4	3.8	220	227	2.6	2.6							522	-								19	Fluoropolymer
150AF019	1.50	-	1.00	0.50	28	28	343	345	113	109	0.12	0.02	-	-	1210	943	5.2	2.5	0.0008	>1E+16	1.6	9	1.67	78	Coatings
	38.1	-	25.4	12.7	191	195	2.4	2.4							476	371								16	
200AF919	2.00	0.5	1.00	0.50	22	23	310	310	117	115	0.12	0.02	-		1327	-	5.2	2.5	0.0008	>1E+16	1.1	9	1.79	56	
	50.8	12.7	25.4	12.7	150	156	2.1	2.1							522	-								11	
250AF029	2.50	-	2.00	0.50	29	30	340	360	113	109	0.05	0.02	-	-	1491	1133	4.6	3	0.0014	>1E+16	2.1	9	1.57	50	
	63.5	-	50.8	12.7	201	210	2.3	2.5							587	446								10	
300AF929	3.00	0.5	2.00	0.50	25	26	270	272	118	116	0.08	0.01	-	-	1413	-	4.5	2.6	0.0010	>1E+16	1.3	9	1.67	39	
	76.2	12.7	50.8	12.7	172	180	1.9	1.9							556	-								8	
200AF011	2.00	-	25.4	1.00	22	22	300	310	108	103	0.14	0.05	-	-	1668	1087	4.2	2.7	0.0014	>1E+16	1.6	9	1.79	55	
	50.8	-	25.4	25.4	151	154	2.1	2.1							657	428								11	
300AF021	3.00	-	2.00	1.00	24	25	310	320	109	108	0.08	0.05	-	-	1700	1365	3.8	2.7	0.0014	>1E+16	1.8	9	1.67	39	
	76.2	-	50.8	0.49	164	174	2.1	2.2							669	537								8	
50NP	0.49	-	0.49	-	4	4	609	609	75	74	0.06	0.02	16	15	-	-	7.5	3.0	0.0030	>1E+16	1.5	13	1.45	265	
	12.5	-	12.5	-	328	329	4.2	4.2							-	-								54	
100NP	0.98	-	0.98	-	4	4	580	609	80	75	0.06	0.02	16	15	-	-	7.6	3.2	0.0020	>1E+16	2.3	13	1.45	133	
	25	-	2	-	302	314	4.0	4.2							-	-								27	Apical NP is
200NP	1.97	-	1.97	-	4	4	566	580	67	65	0.07	0.03	16	15	-	-	5.6	3.2	0.0020	>1E+16	2.7	13	1.45	66	designed give
	50	-	5	-	280	292	3.9	4.0							-	-								14	better dimensional
300NP	2.95	-	2.95	-	4	4	551	580	102	98	0.07	0.03	16	15	-	-	4.9	3.2	0.0020	>1E+16	2.7	13	1.45	44	stability when
	75	-	7	-	285	296	3.8	4.0						'	-	-								9	laminated to metals
500NP	4.92	-	4.92	-	3	4	537	551	82	80	0.07	0.03	16 ~	1	-	-	3.8	3.1	0.0020	>1E+16	2.7	13	1.45	27	
	125	-	125	-	263	277	3.7	3.8							-	-								5	
50HP	0.49	-	0.49	-	5	5	914	943	48	45	0.05	0.01	11	11	-	-	7.5	3.1	0.0030	>1E+16	0.8	7	1.46	263	Apical HP offers
	12.5	-	12.5	-	350	380	6.3	6.5							-	-								54	high dimensional
100HP	0.98	-	0.98	-	5	5	870	841	42	44	0.06	0.01	11	11	-	-	7.6	3.1	0.0020	>1E+16	1.2	7	1.46	132	stability combined
	25	-	2	-	346	354	6.0	5.8							-	-								27	with low moisture
200HP	1.97	-	1.97	-	4	5	812	812	47	48	0.06	0.01	11	11	-	-	5.7	3.1	0.0020	>1E+16	1.2	7	1.46	66	absorption
	50	-	5	-	335	344	5.6	5.6							-	-								13	

urate and reliable, they are presented without guarantee or warranty of any kind, express or
products or application of the suggestion described are assumed by the user.
thout representation or warranty that any such use is free of patent infringement and are not
city data or safety measures are fully indicated or that other measures may not be required.

Properties are 3 Sigma Lower Control Limit values MD = Machine direction
TD = Transverse direction