

MELDIN 7000 Series Data Sheet (물성표)

HIGH PERFORMANCE MATERIAL



Property at @ 73°F(23℃) 상온에서의 물성	TEST METHOD	ENGLISH (METRIC)	MELDIN 7001	MELDIN 7021	MELDIN 7022	MELDIN 7211	MELDIN 7003
MECHANICAL 기계적 특성							
Tensile Strength 인장강도	ASTM D638	psi(Mpa)	12500(86.2)	9500(65.5)	8000(55)	7500(51.7)	9200(63.4)
Elongation 연신률	ASTM D638	%	8.0	4.7	3.0	4.0	5.5
Flexural Strength 굴곡강도	ASTM D790	psi(Mpa)	15800(109)	15800(109)	13000(89.6)	11800(81.4)	13000(89.5)
Flexural Modulus 굴곡탄성계수	ASTM D790	psix10 ⁵ (Gpa)	4.6(3.1)	5.3(3.6)	7.7(5.2)	5.0(3.4)	4.6(3.1)
Compressive Stress @ 1% Strain 압축강도 1%변형	ASTM D695	psi(Mpa)	3800(26.2)	4300(29.7)	4700(32.4)	3500(24)	3700(25.5)
Compressive Stress @ 10% Strain 압축강도 10%변형	ASTM D695	psi(Mpa)	18500(127.5)	18000(124)	15500(107)	14950(103)	17000(117)
Compressive Modulus 압축탄성계수	ASTM D695	psi x 10 ⁵ (Gpa)	3.8(2.6)	4.5(3.1)	4.8(3.3)	3.5(2.4)	3.6(2.5)
COEFFICIENT OF THERMAL EXPANSION 열팽창계수							
73 to 500°F(23 to 260℃)	ASTM E831	in/in/°F (m/m/°C)x10 ⁵	2.7(4.9)	2.2(4.0)	1.4(2.5)	2.4(4.3)	-
Thermal Conductivity 열전도도	ASTM E433	BTU in/hr ft ² °F (W/m °C)	2.4(0.34)	5(0.71)	-	5.2(0.74)	-
ELECTRICAL 전기적 특성							
Dielectric Strength, Short time 2mm thick 절연파괴강도	ASTM D149	V/mil(MV/m)	580(22.9)	280(11)	-	-	-
Dielectric Constant 100 Hz 유전상수 100Hz	ASTM D150	-	3.18	-	-	-	-
Dielectric Constant 10 KHz 유전상수 10KHz	ASTM D150	-	3.16	-	-	-	-
Dielectric Constant 1 MHz 유전상수 1MHz	ASTM D150	-	3.14	-	-	-	-
Surface Resistivity 표면저항	ASTM D257	Ohm·sq	10 ¹⁵ - 10 ¹⁶	10 ⁸ - 10 ⁹	-	-	-
OTHER 기타							
Special Gravity 비중	ASTM D792	-	1.43	1.51	1.65	1.53	1.61
Hardness Rockwell E 록웰경도	ASTM D785	-	40-55	25-40	5-20	1-15	-
Water Absorption, 24 hours 물흡수율 24시간	ASTM D570	%	0.23	0.19	0.25	0.23	-
Water Absorption, 48 hours 물흡수율 48시간	ASTM D570	%	0.64	0.50	0.48	0.46	-
Deformation under Load @ 2000 psi 2000 psi 하중내 변형	ASTM D-621	%	0.1	0.1	-	-	-
Limiting Oxygen Index	ASTM D2863	-	100	100	-	-	-
MECHANICAL PROPERTIES @ 500°F(260℃) 260℃ 고온에서의 기계적 특성							
Tensile Strength 인장강도	ASTM D638	psi(Mpa)	6250(43)	5700(39.3)	4500(31)	4300(29.7)	-
Elongation 연신률	ASTM D638	%	5.0	3.2	2.4	2.8	-
Flexural Strength 굴곡강도	ASTM D790	psi(Mpa)	9100(62.7)	8600(59.3)	7000(48.3)	6000(41.4)	-
Flexural Modulus 굴곡탄성계수	ASTM D790	psix10 ⁵ (Gpa)	2.5(1.7)	3.5(2.4)	5.2(3.6)	3.0(2.1)	-