The Resin ENTERPRISE, Inc.

The Specialists for Resin Distribution & Compounding

Technical Data Sheet

NYLON 6 MOLDING COMPOUNDS TYPICAL PROPERTIES (1)

Properties	Test Method	Units	Nylon 6 Unfilled	Nylon 6 13% Glass Reinforced 20-1003	Nylon 6 25% Glass Reinforced 20-1005	Nylon 6 33% Glass Reinforced 20-1006	Nylon 6 33% Glass Reinforced Flame Retardant	Nylon 6 40% Mineral Filled 22-1008	Nylon 6 25% Mineral 15% Glass Reinforced 23-1008
Physical									
Specific Gravity	ASTM-D792	----	1.14	1.22	1.32	1.37	1.57	1.51	1.49
Water Absorption (24 hr)	ASTM-D570	%	1.6	1.2	1.2	1.1	0.9	0.9	0.09
Mechanical									
Tensile Strength	ASTM-D638	psi	11.500	14,200	20,000	24,500	22,000	11,000	20,000
Tensile Elongation	ASTM-D638	%	7.5	3.0	2.5	3	4	3	4.0
Flexural Strength	ASTM-D790	psi	16,000	18,700	32,000	36,200	28,500	18,250	30,000
Flexural Modulus	ASTM-D790	psi	410,000	700,000	1,050,000	1,300,000	1,400,000	800,000	1,500,000
Izod Impact Strength		ft. lb./in.							
Notched (1/8")			1.0	1.0	1.8	2.4	1.4	0.8	0.8
Unnotched (1/8")			NB	6.0	15.0	22	10.0	10.5	12.0
Rockwell Hardness	ASTM-D785	R Scale	115	121	121	125	123	120	123

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NYLON 6 MOLDING COMPOUNDS TYPICAL PROPERTIES (1 CONT'D.)

Properties	Test Method	Units	Nylon 6 Unfilled	Nylon 6 13% Glass Reinforced 20-1003	Nylon 6 25% Glass Reinforced 20-1005	Nylon 6 33% Glass Reinforced 20-1006	Nylon 6 33% Glass Reinforced Flame Retardant	Nylon 6 40% Mineral Filled 22-1008	Nylon 6 25% Mineral 15% Glass Reinforced 23-1008
Thermal									
Melting Point	ASTM-D7898	°C		428			425	428	
Heat Deflection Temp.	ASTM-D648	°F							
66 psi			350	410	420		415	360	415
264 psi			165	390	410	410	405	250	400
Coefficient of Linear Thermal Expansion	ASTM-D696	in./in./ °F X 10-5	4.6	2.7	1.8	1.8	1.8	2.8	2.0
Electrical									
Die Electric Strength (S-T)	ASTM-D149	volts-mil	420	500	515	515	450	480	490
Miscellaneous									
Flammability	UL Subj. 94	----	V-2	94HB	94HB	94HB	VO	94HB	94HB
Mold Shrinkage	ASTM-D955	in./in.	0.012	0.004	0.004	0.035	0.003	0.010	0.005

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NYLON 6 MOLDING COMPOUNDS TYPICAL PROPERTIES (2)

Properties	Test Method	Units	Nylon 6 40% Glass Reinforced	Nylon 6 50% Glass Reinforced	Nylon 6 60% Glass Reinforced	Nylon 6 30% Glass Reinforced 15% PTFE	Nylon 6 40% Mineral
Physical							
Specific Gravity	ASTM-D792	----	1.48	1.57	1.63	1.49	1.51
Water Absorption (24 hr)	ASTM-D570	%	0.60	0.75	0.35	0.9	0.9
Mechanical							
Tensile Strength	ASTM-D638	psi	29,900	31,500	30,000	19,200	11,300
Tensile Elongation	ASTM-D638	%	2.0	2.5	1.5	3	3
Flexural Strength	ASTM-D790	psi	42,000	50,000	43,500	33,500	18,500
Flexural Modulus	ASTM-D790	psi	1,550,000	2,000,000	2,100,000	1,250,000	800,000
Izod Impact Strength	ASTM-D256	ft. lb./in.					
Notched (1/8")			2.6	3.0	3.9	2.0	0.8
Unnotched (1/8")			29	21	NB	10.0	10.5
Rockwell Hardness	ASTM-D785	R Scale		121	121	122	120

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Technical Data Sheet

NYLON 6 MOLDING COMPOUNDS TYPICAL PROPERTIES (2 CONT'D.)

Properties	Test Method	Units	Nylon 6 40% Glass Reinforced	Nylon 6 50% Glass Reinforced	Nylon 6 60% Glass Reinforced	Nylon 6 30% Glass Reinforced 15% PTFE	Nylon 6 40% Mineral
Thermal							
Heat Deflection Temp.	ASTM-D648	˚F					
66 psi			499	425		415	360
264 psi			491	420	495	400	250
Coefficient of Linear Thermal Expansion	ASTM-D696	in./in./ ˚F X 10-5					
Electrical							
Die Electric Strength (S-T)	ASTM-D149	volts/mil	500	450	500	520	480
Miscellaneous							
Flammability	UL SUBJ. 94	----	HB	HB	HB	HB	HB
Mold Shrinkage (1/8")	ASTM-D955	in./in.	0.006	0.003	0.002	0.004	0.10

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