

Aegis[®] H8202NLB

Aegis[®] H8202NLB is an unfilled, low viscosity, non-lubricated nylon 6 injection molding homopolymer exhibiting excellent melt fluidity for filling thin sections. It exhibits good strength, stiffness, and toughness as well as excellent heat, chemical and abrasion resistance.

TYPICAL PROPERTIES

	ASTM Test Method	Dry	Conditioned
PHYSICAL			
Specific Gravity	D-792	1.13	-
Mold Shrinkage (1/8" bar, in/in)	-	0.012	-
Rockwell Hardness, R Scale		119	-
Moisture, %	D-570		
1.6 (24 Hour)		1.6	-
2.7 (50% RH)		2.7	-
9.5 (Saturation)		9.5	-
MECHANICAL			
Tensile Strength, Yield, MPa (psi)	D-638		
-40°C (-40°F)		126 (18,200)	-
23°C (73°F)		79 (11,500)	36 (5,220)
80°C (176°F)		35 (5,070)	-
121°C (250°F)		25 (3,625)	-
Tensile Strength, Break, MPa (psi)	D-638		
23°C (73°F)		75 (10,900)	60 (8,700)
Elongation, Yield, %	D-638		
23°C (73°F)		4	25
80°C (176°F)			
121°C (250°F)			
Elongation, Break, %	D-638		
23°C (73°F)		55	>100
Flexural Modulus, MPa (psi)	D-790		
-40°C (-40°F)		3,010 (436,000)	3,660 (531,000)
23°C (73°F)		2,830 (410,000)	740 (107,000)
65°C (149°F)		500 (72,500)	-
90°C (194°F)		350 (50,700)	-
121°C (250°F)		305 (44,200)	-
Flexural Strength, MPa (psi)	D-790		
-40°C (-40°F)		170 (24,600)	155 (22,500)
23°C (73°F)		110 (15,900)	35 (5,070)
65°C (149°F)		30 (4,350)	-
90°C (194°F)		20 (2,900)	-
121°C (250°F)		20 (2,900)	-
IMPACT			
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
-40°C (-40°F)		50 (0.9)	45 (0.8)
23°C (73°F)		60 (1.1)	NB
THERMAL			
Melting Point, °C(°F)	D-3418	220 (428)	-
Heat Deflection @ 264 psi (1.8 MPa) °C(°F)	D-648	65 (149)	-
Heat Deflection @ 66 psi (0.45 MPa) °C(°F)	D-648	178 (352)	-
Coef. of Linear Thermal Expansion, mm/mm °C (in/in °F)	E-831	0.83 x 10 ⁻⁴	-

PROCESSING GUIDELINES

Material Handling

Max. Water content: 0.15%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 85 °C (185 °F) is recommended. Drying time is dependent on moisture level. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your Honeywell representative.

Typical Profile

Melt Temperature 240-280 °C (464-536 °F)

Mold Temperature 80-95 °C (176-203 °F)

Injection and Packing Pressure 35-125 bar (500-1500psi)

Mold Temperatures

A mold temperature of 80-95 °C (176-203 °F) is recommended, but temperatures of as low as 10 °C (50 °F) can be used where applicable.

Pressures

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Fill Rate

Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing.

These values are for natural color resins only. Colorants or other additives may alter some or all of these properties. The data listed here fall within the normal range of product properties, but should not be used to establish specification limits nor used alone as the basis of design.

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