



# Hylon® N1033HL

Ravago Manufacturing Americas, LLC - Polyamide 66

## General Information

General	
Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Glass Fiber, 33% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Heat Stabilized • Lubricated
RoHS Compliance	• RoHS Compliant
Automotive Specifications	<ul style="list-style-type: none"> <li>• CHRYSLER MS-DB41 CPN1900 Color: Black</li> <li>• CHRYSLER MS-DB41 CPN4347 Color: DX9 BLACK Black 078</li> <li>• FORD WSK-M4D663-A Color: Black</li> <li>• FORD WSK-M4D663-A Color: Natural</li> <li>• GM GMP.PA66.013 Color: Black</li> <li>• GM GMP.PA66.013 Color: Natural</li> <li>• GM GMP.PA66.065 Color: Black</li> <li>• GM GMP.PA66.065 Color: Natural</li> <li>• GM GMW3038P-PA66-GF35H Color: Black</li> </ul>
Forms	• Pellets
Processing Method	• Injection Molding

## ASTM and ISO Properties <sup>1</sup>

Physical	Hylon® N1033HL	Hylon® N1033HL	Unit	Test Method
Specific Gravity	1.38	--		ASTM D792
Density	1.38	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage - Flow	3.0E-3 to 5.0E-3	--	in/in	ASTM D955
Molding Shrinkage - Flow	0.30 to 0.50	--	%	ISO 294-4
Water Absorption (24 hr)	0.70	--	%	ASTM D570
Mechanical	Hylon® N1033HL	Hylon® N1033HL	Unit	Test Method
Tensile Strength (Yield, 73°F)	28000	20000	psi	ASTM D638
Tensile Stress (Yield, 73°F)	29400	--	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	2.0	3.0	%	ASTM D638
Tensile Strain (Break, 73°F)	2.2	--	%	ISO 527-2
Flexural Modulus (73°F)	1.35E+6	900000	psi	ASTM D790
Flexural Modulus (73°F)	1.38E+6	--	psi	ISO 178
Flexural Strength (73°F)	39000	28000	psi	ASTM D790
Flexural Stress (73°F)	39900	--	psi	ISO 178
Impact	Hylon® N1033HL	Hylon® N1033HL	Unit	Test Method
Notched Izod Impact (73°F)	2.2	2.5	ft-lb/in	ASTM D256
Notched Izod Impact Strength 73°F	5.2	--	ft-lb/in <sup>2</sup>	ISO 180
Hardness	Hylon® N1033HL	Hylon® N1033HL	Unit	Test Method
Rockwell Hardness (M-Scale)	98	85		ASTM D785

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Thermal	Hylon® N1033HL	Hylon® N1033HL	Unit	Test Method
Deflection Temperature Under Load 66 psi, Unannealed	495	--	°F	ASTM D648
Heat Deflection Temperature 66 psi, Unannealed	495	--	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed	469	475	°F	ASTM D648
Heat Deflection Temperature 264 psi, Unannealed	471	--	°F	ISO 75-2/A
CLTE - Flow	1.3E-5	--	in/in/°F	ASTM D696
Electrical	Hylon® N1033HL	Hylon® N1033HL	Unit	Test Method
Volume Resistivity	1.0E+16	--	ohm·cm	ASTM D257
Dielectric Strength <sup>2</sup>	520	--	V/mil	ASTM D149
Flammability	Hylon® N1033HL	Hylon® N1033HL	Unit	Test Method
Flame Rating				UL 94
0.0295 in, NC	--	HB		
0.0590 in	HB	--		
0.0591 in, BK	--	HB		
0.0591 in, NC	--	HB		
0.118 in, BK	--	HB		
0.118 in, NC	--	HB		

### Processing Information

Injection	Nominal Value	Unit
Drying Temperature	165	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.20	%
Processing (Melt) Temp	540 to 570	°F
Mold Temperature	150 to 210	°F
Back Pressure	20.0 to 60.0	psi
Screw Speed	40 to 120	rpm

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Method A (Short-Time)