

Hylon® N1000HL

Ravago Manufacturing Americas, LLC - Polyamide 66

Friday, 29 October 2010

| General Information | | | | |
|---------------------------|--------------------------------|--|--|--|
| General | | | | |
| Material Status | Commercial: Active | | | |
| Availability | North America | | | |
| Additive | Heat Stabilizer Lubricant | | | |
| Features | Heat Stabilized Lubricated | | | |
| Uses | Automotive Applications | | | |
| RoHS Compliance | RoHS Compliant | | | |
| Automotive Specifications | FORD WSK-M4D648-A Color: Black | | | |
| Forms | • Pellets | | | |
| Processing Method | Injection Molding | | | |

| | ASTM and ISO Properties 1 | | | | | |
|-------------------------------------|---------------------------|-------------------|----------|-------------|--|--|
| Physical | Hylon® N1000HL | Hylon® N1000HL | Unit | Test Method | | |
| Specific Gravity | 1.14 | | | ASTM D792 | | |
| Molding Shrinkage - Flow (0.125 in) | 0.014 to 0.019 | | in/in | ASTM D955 | | |
| Water Absorption (24 hr) | 1.3 | | % | ASTM D570 | | |
| Mechanical | Hylon® N1000HL | Hylon® N1000HL | Unit | Test Method | | |
| Tensile Strength (73°F) | 12000 | 9500 | psi | ASTM D638 | | |
| Tensile Elongation (Break, 73°F) | 30 | 200 | % | ASTM D638 | | |
| Flexural Modulus (73°F) | 440000 | 190000 | psi | ASTM D790 | | |
| Flexural Strength (73°F) | 16500 | 5900 | psi | ASTM D790 | | |
| Impact | Hylon® N1000HL | Hylon® N1000HL | Unit | Test Method | | |
| Notched Izod Impact (73°F) | 1.0 | 2.5 | ft·lb/in | ASTM D256 | | |
| Hardness | Hylon® N1000HL | Hylon® N1000HL | Unit | Test Method | | |
| Rockwell Hardness (M-Scale) | 85 | 60 | | ASTM D785 | | |
| Thermal | Hylon® N1000HL | Hylon® N1000HL | Unit | Test Method | | |
| Deflection Temperature Under Load | | | | ASTM D648 | | |
| 66 psi, Unannealed | 460 | 430 | °F | | | |
| Deflection Temperature Under Load | | | | ASTM D648 | | |
| 264 psi, Unannealed | 190 | 160 | °F | | | |
| CLTE - Flow | 0.000046 | | in/in/°F | ASTM D696 | | |
| Electrical | Hylon® N1000HL | Hylon® N1000HL | Unit | Test Method | | |
| Volume Resistivity | 1.0E+15 | 1.0E+13 | ohm·cm | ASTM D257 | | |
| Dielectric Strength | | | | ASTM D149 | | |
| | | 550 | V/mil | | | |
| 2 | 580 | | V/mil | | | |
| Dielectric Constant | | | | ASTM D150 | | |
| 73°F, 100 Hz | 3.70 | 6.00 | | | | |
| | | | | | | |

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| Flammability | Hylon® N1000HL | Hylon® N1000HL | Unit Test Method |
|-------------------------------|-------------------|-------------------|------------------|
| Flame Rating - UL (0.0590 in) | V-2 | V-2 | UL 94 |

| 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 | 520 to 560 | °F | | |
| Mold Temperature | 120 to 200 | °F | | |
| Back Pressure | 50.0 to 100 | psi | | |
| Screw Speed | 40 to 140 | rpm | | |

Notes

¹ Typical properties: these are not to be construed as specifications.

² Method A (Short-Time)