

Ultramid® A3L HP UV BK23220

Polyamide 66

Product Description

Ultramid A3L HP UV BK23220 is an unreinforced, impact modified, UV stabilized, high flow nylon 66 for injection molding. This grade has excellent flow and improved ambient and low temperature toughness.

Applications

Typical applications include cable ties, fasteners and clamps.

| PHYSICAL | ISO Test Method | Property Value | |
|--|-----------------|----------------|-------------|
| Density, g/cm ³ | 1183 | 1.10 | |
| MECHANICAL | ISO Test Method | Dry | Conditioned |
| Tensile Modulus, MPa | 527 | | |
| 23°C | | 2,430 | - |
| Tensile stress at yield, MPa | 527 | | |
| 23°C | | 60.8 | - |
| Tensile strain at yield, % | 527 | | |
| 23°C | | 7 | - |
| Nominal strain at break, % | 527 | | |
| 23°C | | 28 | - |
| Flexural Modulus, MPa | 178 | | |
| 23°C | | 2,230 | - |
| IMPACT | ISO Test Method | Dry | Conditioned |
| Izod Notched Impact, kJ/m ² | 180 | | |
| -40°C | | 9.1 | - |
| 23°C | | 18 | - |
| Charpy Notched, kJ/m ² | 179 | | |
| -30°C | | 8.6 | - |
| 23°C | | 17 | - |
| THERMAL | ISO Test Method | Dry | Conditioned |
| Melting Point, °C | 3146 | 260 | - |
| HDT A, °C | 75 | 70 | - |
| HDT B, °C | 75 | 192 | - |
| UL RATINGS | UL Test Method | Property Value | |
| Flammability Rating, 0.75mm | UL94 | HB | |
| Relative Temperature Index, 0.75mm | UL746B | | |
| Mechanical w/o Impact, °C | | 110 | |
| Mechanical w/ Impact, °C | | 105 | |
| Electrical, °C | | 140 | |
| Flammability Rating, 3.0mm | UL94 | HB | |
| Relative Temperature Index, 3.0mm | UL746B | | |
| Mechanical w/o Impact, °C | | 110 | |
| Mechanical w/ Impact, °C | | 105 | |
| Electrical, °C | | 140 | |

Processing Guidelines

Material Handling

Nylon 66 materials must be properly dried in order to provide parts with optimum strength and toughness. Nylon 66 materials are hygroscopic and will become degraded by excessive moisture during the injection molding process. For unopened bag/box, dry at 60 degC (140 degF) for 1-2 hours. For material exposed to the atmosphere, if additional drying is needed, dry at 66 degC (150 degF) or until the moisture level is between 0.04 - 0.20%.

Typical Profile

Melt Temperature: 288-305 degC (550-581 degF)
 Mold Temperature: 60-100 degC (140-212 degF)
 Injection Pressure: 35-125 MPa (5000-18000 psi)

Back Pressure: 0-0.35 MPa (0-50 psi)
 Screw RPM 40-80
 Screw Compression Ratio:3:1-4:1

Mold Temperatures

This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 60-100 degC (140-212 degF) is recommended.

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

Note

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