

Nypel® 2367G HS BK

Polyamide 6

Product Description

Nypel 2367G HS BK is a semi crystalline, heat stabilized, low viscosity, 40% mineral and glass fiber reinforced black PA6 injection molding compound. It possesses a balance of engineering properties in combination with excellent dimensional stability, good flow and processability, low warp and good chemical, abrasion and sink-mark formation resistance.

Applications

Nypel 2367G HS BK is generally recommended for applications such as rotors, wheels, rims, timing belt covers, automotive cooling fans and shrouds.

| PHYSICAL | ASTM Test Method | Property Value | |
|--|------------------|-------------------|-------------|
| Specific Gravity | D-792 | 1.48 | |
| Mold Shrinkage (1/8" bar, in/in) | | 0.004 | |
| Moisture, % | D-570 | | |
| (24 Hour) | | 0.9 | |
| (50% RH) | | 1.6 | |
| (Saturation) | | 5.7 | |
| MECHANICAL | ASTM Test Method | Dry | Conditioned |
| Tensile Strength, Break, MPa (psi) | D-638 | | |
| 23C (73F) | | 120 (17,400) | - |
| Elongation, Break, % | D-638 | | |
| 23C (73F) | | 3 | - |
| Flexural Modulus, MPa (psi) | D-790 | | |
| 23C (73F) | | 7,590 (1,100,000) | - |
| Rockwell Hardness, R Scale | D-785 | 121 | - |
| IMPACT | ASTM Test Method | Dry | Conditioned |
| Notched Izod Impact, J/M (ft-lbs/in) | D-256 | | |
| 23C (73F) | | 50 (0.9) | - |
| THERMAL | ASTM Test Method | Dry | Conditioned |
| Melting Point, C(F) | D-3418 | 220 (428) | - |
| Heat Deflection @ 264 psi (1.8 MPa) C(F) | D-648 | 203 (397) | - |
| Coef. of Linear Thermal Expansion, mm/mm C (in/in F) | E-831 | 0.31 X10-4 | - |

Processing Guidelines

Material Handling

Material is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 180F (83C). Recommended moisture levels for achieving optimum surface qualities and mechanical properties is 0.05% - 0.12%. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile

Melt Temperature 270-295 degC (518-563 degF)
Mold Temperature 80-95 degC (176-203 degF)



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

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 80-95 degC (176-203 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.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage.

Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

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