Product Information

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Ultramid® B3WG6 GPX BK23238
Polyamide 6

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Product Description

Ultramid B3WG6 GPX BK23238 is a 30% glass fiber reinforced, heat stabilized injection molding PA6 grade for primary use in welded air intake manifolds. This grade has been engineered to provide improved burst pressure strengths with excellent long-term burst strength retention.

Applications

Typical applications include automotive manifolds and other powertrain components.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm³	1183	1.35	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		9,600	-
Tensile stress at break, MPa	527		
23C		185	-
Tensile strain at break, %	527		
23C		3.5	-
Flexural Strength, MPa	178		
23C		265	-
Flexural Modulus, MPa	178		
23C		8,300	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Charpy Notched, kJ/m²	179		
23C		13	-
Charpy Unnotched, kJ/m²	179		
23C		95	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-
HDT A, C	75	202	-

Processing Guidelines

Material Handling
Max. Water content: 0.15%
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 Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile
Melt Temperature 270-290C (518-554F)
Mold Temperature 80-90C (176-194F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

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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 80-95C (176-203F) 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