

Ultramid® B3G4

PA6-GF20

BASF

Capron® GR20是一种20%玻璃增强尼龙6注塑化合物，具有均衡的工程特性和出色的加工性能及表面美观性。也提供热稳定(GR20 HS)和/或有色版本。

Capron® GR20是要求更严格应用的理想选择，例如安全帽零部件、垫圈、齿轮、引擎、电动机零部件和滑槽。

机械性能	干 / 湿	单位	试验方法
ISO数据			
拉伸模量	6700 / -	MPa	ISO 527
断裂应力	140 / -	MPa	ISO 527
断裂伸长率	4 / -	%	ISO 527
无缺口简支梁冲击强度, +23°C	60 / -	kJ/m²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	8 / -	kJ/m²	ISO 179/1eA
弯曲模量, 23°C	5700 / -	MPa	ISO 178

热性能	干 / 湿	单位	试验方法
ISO数据			
熔融温度, 10°C/min	220 / *	°C	ISO 11357-1/-3
热变形温度, 1.80 MPa	200 / *	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	215 / *	°C	ISO 75-1/-2
线性热膨胀系数, 平行	25 / *	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直	110 / *	E-6/K	ISO 11359-1/-2

电性能	干 / 湿	单位	试验方法
ISO数据			
体积电阻率	>1E13 / -	Ohm*m	IEC 62631-3-1

其它性能	干 / 湿	单位	试验方法
ISO数据			
吸水性	7.6 / *	%	类似ISO 62
吸湿性	2.2 / *	%	类似ISO 62
密度	1280 / -	kg/m³	ISO 1183
堆积密度	700	kg/m³	-

模塑测量的特殊性能	干 / 湿	单位	试验方法
ISO数据			
粘数.	145 / *	cm³/g	ISO 307, 1157, 1628

试样制备条件	数值	单位	试验方法
ISO数据			
注塑, 熔体温度	275	°C	ISO 294
注塑, 模具温度	95	°C	ISO 294

加工推荐 (注塑)	数值	单位	试验方法
预干燥-温度	80	°C	-
预干燥-时间	4	h	-
加工湿度	≤ 0.15	%	-
注塑熔体温度	270 - 295	°C	-
模具温度	80 - 95	°C	-

特征

加工方法

注塑

添加剂

脱模助剂

供货形式

粒料

注塑

PREPROCESSING

Pre/Post-processing, max. allowed water content: .15 %

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Pre/Post-processing, Pre-drying, Temperature: 80 °C

Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING

injection molding, Melt temperature, range: 270 - 290 °C

injection molding, Melt temperature, recommended: 280 °C

injection molding, Mold temperature, range: 80 - 90 °C

injection molding, Mold temperature, recommended: 80 °C

injection molding, Dwell time, thermoplastics: 10 min

PREPROCESSING

Max. Water content: 0.12%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80 °C (176 °F) is recommended. Drying time is dependent on moisture level.

Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

PROCESSING

Melt Temperature 270-295 °C (518-563 °F)

Mold Temperature 80-95 °C (176-203 °F)

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

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 °C (176-203 °F) is required.

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. A maximum of 3.5 bar (50 psi) is recommended to minimize glass fiber breakage.

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