

“TOYOLAC”
Glass Fiber Reinforced ABS//PBT Alloy Resin
VX10G20

Technical Guide
for
Processing & Molding

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1. Typical property data of Toyolac VX10G20

ALLOY 合金型				
Property 代表物性	Test Method 试验法	Test Condition 试验条件	Units 单位	Glass Fiber Reinforced ABS//PBT 玻璃纤维强化 ABS//PBT 树脂
			Type 型号	VX10G20
ISO STANDARD				
Melt Flow Rate 流动系数	ISO 1133	240°C / 10 kg	g/10min	36
Charpy Impact Strength (notched) 缺口冲击强度	ISO 179/1eA	23°C / 50 %RH	kJ/m ²	10
Deflection Temperature Under Load 热变形温度	ISO 75	1.8 MPa / 120°C/hr	°C	112
Tensile Strength 引张强度;降伏点	ISO 527	5 mm/min	MPa	101
Tensile Elongation at Break 拉伸伸长率			%	4
Tensile Modulus 拉伸模数			1 mm/min	MPa
Flexural Strength 弯曲强度	ISO 178	2 mm/min	MPa	158
Flexural Modulus 弯曲模数				6050
Density 比重	ISO 1183	23°C	kg/m ³	1300
Glass Content 玻纤含量	Toray Method 东丽法	-	%	20
Flammability 燃烧性	UL94 File No. E41797			HB

Note: The above values are typical data for the products under specific test conditions and not intended for use as limiting specifications.
「以上数据谨代表在特定条件下所得的测定值的代表例」

2. Processing Condition

2.1 Pellet pre-drying

Pellet pre-drying is necessary. Insufficient pre-drying will induce the occurrence of hydrolysis at PBT portion, subsequently impairing the resin property. Recommended standard pre-drying condition is shown in below.

Drying Temperature : 100 ~ 120 oC

Drying Time : 3 ~ 8 hours

2.2 Standard molding condition

Polymer Temperature (°C)	240 ~ 270
Injection Pressure (MPa)	70 ~ 140
Mold Temperature (°C)	60 ~ 80

2.3 Precaution during molding

Please clean and replace with ABS resin or other resins whenever stop molding for the purposes of preventing burnt material formation, protecting molding machine and others.

2.4 Safety precaution

Please read and understand the safety related information [Material Safety Data Sheet (MSDS)] prior starting to use the resin.

2.5 Mold shrinkage rate

Injection Pressure (MPa)	Unit	Transverse Direction			Machine Direction
		A	B	C	D
Minimum Pressure + 0.5	%	0.77	0.74	0.48	0.40
Minimum Pressure + 1.0		0.66	0.65	0.44	0.38

<Molding condition>

Molding machine : Toshiba IS-80G

Molding temperature : 260 °C

Mold temperature : 60°C

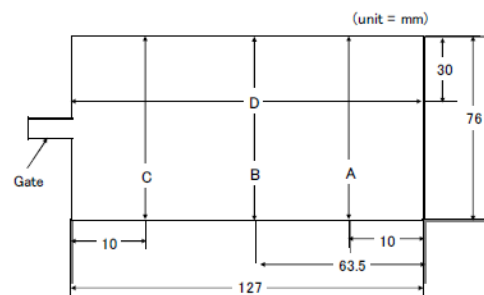
Cycle : 15/20 sec. (injection/cooling)

Back pressure : 6MPa (gauge pressure)

Screw rotation : 93 rpm

Mold dimension : 127 • 76 • 3mmt

Injection pressure : Fill resin with minimum pressure + 0.5 and +1.0 MPa.



<Dimension measurement>

Measurement is made after conditioning at 23°C / 50%RH for 24 hours.

2.6 Coefficient of linear thermal expansion

Measurement Direction	Temperature Range	Unit	Test Result
Transverse Direction	23 ~ 100 °C	10 ⁻⁵ /°C	8.9
Machine Direction			2.8

<Test Instrument> : TMA (Seiko Instrument)

Important Notes:

1. In as much as Toray Plastics (Malaysia) Sdn. Bhd. has no control over the use to which other may put this material, it does not guarantee that the same result as those described herein will be obtained. Nor does Toray Plastics (Malaysia) Sdn. Bhd. guarantee the effectiveness or safety of any possible or suggested design for articles of manufacturer as illustrated herein by any photographs, technical drawing and the like. Each user of the material or design or both should make his own tests to determine the suitability of the material or any material for the design, as well as suitability or suggested uses of the material or design described herein are not to be construed as constituting a license under any Toray Plastics (Malaysia) Sdn. Bhd. patent covering such use or as recommendations for use of such material or design in infringement of any patent.
2. The material described here is not recommended for medical application involving any implantation inside the human body. Material Safety Data Sheet (MSDS) for the materials concerned should be referred to before any use.