# HiFill PA6 GF20 RM BK

## Polyamide 6

### **Techmer Engineered Solutions**

#### Message:

HiFill® PA6 GF20 RM BK is a Polyamide 6 (Nylon 6) product filled with 20% glass fiber. It can be processed by injection molding and is available in North America. Primary characteristic: low moisture absorption.

File/ AsinforcementGlass Fiber,20% Filler by WeightFeaturesLow Moisture AbsorptionAppearanceBlackFormsBlackFormsPelletsProcessing MethodInjection MoldingPhysicalNominal ValueUnitSpecific Gravity0.40Molding Shrinkage - Flow (3.18 mm)0.40Odding Shrinkage - Flow (3.18 mm)0.40Molding Shrinkage - Flow (3.18 mm)0.40Morinal ValueUnitTest MethodMorinal ValueUnitRecker Absorption (24 hr)0.90Nominal ValueUnitRecker Bischer Gravity15Recker Bischer Gravity15Recker Bischer Gravity16Recker Bischer Gravity3.5MethanicalMorinal ValueItensile Strength Break)3.6Bischer Gravity3.6Recker Bischer Gravity6.89Itensile Strength Break)8.80Recker Bischer Gravity3.71 D790Itensile Strength Break)8.80Recker Bischer Gravity6.89Recker Bischer Gravity7.6Resker Bischer Gravity6.89Recker Bischer Gravity9.7Refer Die Gravity1.61String Die Gravity1.61Recker Bischer Gravity9.7Resker Bischer Gravity9.6Recker Bischer Gravity9.6Recker Bischer Gravity9.6Recker Bischer Gravity9.6Recker Bischer Gravity9.6Re	General Information			
AppearanceBlackFormsPelletsProcessing MethodInjection MoldingPhysicalNominal ValueUnitPhysical1.28g/cm³Molding Shrinkage - Flow (3.18 mm)0.40% 0Vata Assportion (24 hr)0.90% 0Marchaes (R-Scale)Nominal ValueUnitMachanesaNominal ValueUnitMechanelNominal ValueUnitMechanelSecondMorinal ValueMechanelNominal ValueUnitMethandes (R-Scale)135MarchaesReckwell Hardness (R-Scale)35% 0Tensile Elongation (Break)35% 0Reskanel0.90MPaTensile Elongation (Break)6890MPaReskanelNominal ValueUnitImpactNominal ValueUnitImpactNominal ValueUnitNoticel Izod InterprotectionScale MethodNoticel Izod InterprotectionScale MethodNominal ValueUnitTest MethodNominal ValueUnitScale MethodNoticel Izod InterprotectionScale MethodNominal ValueUnitScale MethodNoticel Izod InterprotectionScale MethodNoticel Izod InterprotectionScale MethodNoticel Izod Izo	Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Arrigeneric     Pellets       Forms     Pellets       Processing Method     Injection Molding       Physical     Nominal Value     Unit     Test Method       Specific Gravity     128     g/cm <sup>2</sup> ASTM D792       Molding Shrinkage - Flow (3.18 mm)     0.40     %     ASTM D795       Mater Absorption (24 hr)     0.90     %     ASTM D795       Hardness (R-Scale)     115     Test Method     ASTM D785       Mechanical     Nominal Value     Unit     Test Method       Tensile Strength (Break)     138     MPa     ASTM D638       Tensile Strength (Break)     35     MPa     ASTM D638       Flexural Modulus     6890     MPa     ASTM D790       Impact     Nominal Value     Unit     Test Method       Noticel Izength     6890     MPa     ASTM D638       Impact     Nominal Value     Unit     Test Method       Noticel Izength     0     //ma     ASTM D639       Palenameter     Sortinal Value     Unit     Test Method       Nortine	Features	Low Moisture Absorption		
Processing MethodInjection MoldingPhysicalNominal ValueUnitTest MethodSpecific Gravity1.28g/cn <sup>-1</sup> ASTM D792Molding Shrinkage - Flow (3.18 mm)0.40%ASTM D555Water Absorption (24 hr)0.90%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)115XTM D785MechanicalNominal ValueUnitTest MethodTensile Strength (Break)1.8MPaASTM D783Tensile Strength (Break)3.5%ASTM D783Rexural Modulus6890MPaASTM D790InpactNominal ValueUnitTest MethodInpactNominal ValueUnitTest MethodNotchel Jeongtoin (Break)80JmaASTM D793InpactNominal ValueUnitTest MethodNotchel Jouf Impact (23*C) 3.18 mm)80JmaASTM D256Deflection Temperature Under Load (18 MPA, Unannealed)204Test MethodDeflection Temperature Under Load (18 MPA, Unannealed)204Test Met	Appearance	Black		
PhysicalNominal ValueUnitTest MethodSpecific Gravity1.28g/cm³ASTM D792Molding Shrinkage - Flow (3.18 mm)0.40% 0ASTM D955Water Absorption (24 hr)0.90% 0ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)115StM D785MechanicalNominal ValueUnitTest MethodTensile Strength (Break)138MPaASTM D638Tensile Strength (Break)3.5% 40ASTM D790Flexural Modulus6890MPaASTM D790ImpactNominal ValueUnitTest MethodInstrength207MPaASTM D790ImpactNominal ValueUnitTest MethodNotchel Izod Impact (23°C, 3.18 mm)80J/mASTM D790Notchel Izod Impact (23°C, 3.18 mm)204rcASTM D56TermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)204rcASTM D648C1E - Flow204cmrc/m/CASTM D656InjectionNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms-cmASTM D55Injection1.0E+15ohms-cmASTM D55Drying Time4.0Nominal ValueInitDrying Time4.0Nominal ValueInitDrying Time4.0Nominal ValueTest MethodDrying Time6.0Simmer <td>Forms</td> <td>Pellets</td> <td></td> <td></td>	Forms	Pellets		
Specific Gravity128g/cm²ASTM D792Molding Shrinkage - Flow (3.18 mm)0.40%ASTM D555Water Absorption (24 hr)0.90%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)115XSTM D785MechanicalNominal ValueUnitTest MethodTensile Strength (Break)138MPaASTM D638Tensile Elongation (Break)3.5%ASTM D638Flexural Modulus6890MPaASTM D790InpactNominal ValueUnitTest MethodNotched Izod Inpact (23°C 3.18 mm)80J/mASTM D556ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (18 the gravity)204CASTM D648CITE - Flow2.04-5cm/cm/°CASTM D648DeflectionTemperature Under Load (18 the gravity)1.05-15InsternASTM D649Volume Resistivity1.02-15insternASTM D649COlymogravity2.02-5insternASTM D57EDiging Timperature2.02-05insternASTM D57EDiging Timperature1.02-15insternASTM D57EDiging Timperature2.02-05insternASTM D648EDiging Timperature2.02-05insternASTM D649EDiging Timperature2.02-05insternASTM D670EDiging Timperature2.03-03-04insternII<	Processing Method	Injection Molding		
Molding Shrinkage - Flow (3.18 mm)0.40%ASTM D955Water Absorption (24 hr)0.90%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)115STM D785MechanicalNominal ValueUnitTest MethodTensile Strength (Break)138MPaASTM D638Tensile Elongation (Break)3.5%ASTM D638Flexural Modulus6890MPaASTM D638Flexural Modulus00MPaASTM D790Flexural Strength80JmASTM D570Nominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80JmASTM D564ClTE - Flow204CSTM D648ClTE - Flow204-5cm/cm/CASTM D648ClTE - Flow10:E15ohms-cmASTM D659Volume Resistivity10:E15ohms-cmASTM D570Oping Timeperature202 0:ccDrig Temperature202 0:CcDrig Temperature205 0:04NortCNominal ValueUnitTest MethodVolume Resistivity10:E15ohms-cmASTM D570Drig Temperature20:00:04CcDrig Temperature20:00:04CcNortic Classing Methot20:00:04CcNortic Classing Methot20:00:04CcNortic Classing Methot20:00:04CcNortic Classing Meth	Physical	Nominal Value	Unit	Test Method
Nature Absorption (24 hr)0.90%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)115	Specific Gravity	1.28	g/cm³	ASTM D792
HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)115ASTM D785MechanicalNominal ValueUnitTest MethodTensile Strength (Break)38MPaASTM D638Tensile Strength (Break)3.5%ASTM D638Flexural Modulus6890MPaASTM D790Flexural Strength207MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)204°CASTM D648CLT E - Flow2.0E - 5cm/cm/°CASTM D648CLTE - Flow1.0E + 15ohms · cmASTM D696DeflectionalNominal ValueUnitTest MethodVolume Resistivity1.0E + 15ohms · cmASTM D257InjectionNominal ValueUnitTest MethodDrying Timeperature8.2°C·Drying Timeperature2.06 to 304°C·Middle Temperature2.06 to 304°C·Middle Temperature2.06 to 304°C·Front Temperature2.06 to 304°C·Middle Temperature2.06 to 304°C·Middle Temperature2.06 to 304°C·Mort Temperature2.06 to 304°C·Mort Temperature2.06 to 304°C·<	Molding Shrinkage - Flow (3.18 mm)	0.40	%	ASTM D955
Notice     Nominal Value     Nominal Value     ASTM D785       Mechanical     Nominal Value     Unit     Test Method       Tensile Strength (Break)     138     MPa     ASTM D638       Tensile Strength (Break)     3.5     %     ASTM D638       Flexural Modulus     6890     MPa     ASTM D790       Flexural Strength     207     MPa     ASTM D790       Impact     Nominal Value     Unit     Test Method       Notched Izod Impact (23°C, 3.18 mm)     80     J/m     ASTM D548       Deflection Temperature Under Load (1.8 MPa, Unannealed)     204     Carc     ASTM D648       CLE F Flow     20.6-5     cm/m/°C     ASTM D648       Injection     Nominal Value     Unit     Test Method       Volume Resistivity     10.6+15     omm/m 'C     ASTM D548       Volume Resistivity     10.6+15     ohms · cm     ASTM D548       Drying Time     82.0     'C     C       Norinal Value     Volume C     C     C       Drying Time     82.0     'C     C	Water Absorption (24 hr)	0.90	%	ASTM D570
MechanicalNominal ValueUnitTest MethodTensile Strength (Break)138MPaASTM D638Tensile Elongation (Break)3.5% OASTM D638Flexural Modulus6890MPaASTM D790Flexural Modulus000MPaASTM D790Impact207MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (18 MPa, Unannealed)204°CASTM D648CLTE - Flow2.0£-5cm/cm/°CASTM D696ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms-cmASTM D257InjectionMominal ValueUnitTest MethodDrying Temperature620 304°C-Drying Time206 to 304°C-Middle Temperature260 to 304°C-Front Temperature260 to 304°C-Front Temperature260 to 304°CFront Temperature260 to 304	Hardness	Nominal Value	Unit	Test Method
Tensile Strength (Break)138MPaASTM D638Tensile Elongation (Break)3.5%PaASTM D638Flexural Modulus6890MPaASTM D790Flexural Strength207MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)204°CASTM D648CLT E - Flow2.0E-5cm/cm/°CASTM D656ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms-cmASTM D257Injg Temperature4.04InitTest MethodDrying Temperature260 to 304°C-Middle Temperature260 to 304°C-Middle Temperature260 to 304°C-Front Temperature260 to 304°C-Middle Temperature260 to 304°C-Middle Temperature260 to 304°C-Front Temperature	Rockwell Hardness (R-Scale)	115		ASTM D785
Tensile Elongation (Break)3.5% ASTM D638Flexural Modulus6890MPaASTM D790Flexural Strength207MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)204°CASTM D648CLT - Flow20E-5cm/cm/°CASTM D649ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms-cmASTM D257InjgettomNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms-cmASTM D257Injgettom82.2°C·CDrying Temperature60 to 304°C·CMiddle Temperature260 to 304°C·CFront Temperature260 to 304°C·CProcessing (Melt) Temp243 to 271°C·CMod Temperature65 to 93.3°C·C	Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus6890MPaASTM D790Flexural Strength207MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80J/mASTM D256ThermalNominal ValueUnitTest MethodDeffection Temperature Under Load (1.8 MPa, Unannealed)204°CASTM D648CLTE - Flow204°CASTM D648CLTE - Flow2.0E-5cm/cm/°CASTM D646Volume Resistivity1.0E+15ohms·cmASTM D257InjectionMominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms·cmASTM D257InjectionS2.2°C·CDrying Temperature60 to 304°C·CMiddl Temperature260 to 304°C·CFront Temperature260 to 304°C·CProcessing (Melt) Temp43 to 271°C·CMod Temperature56.to 93.3°C·C	Tensile Strength (Break)	138	MPa	ASTM D638
Flexural Strength207MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80J/mASTM D256ThermalNominal ValueUnitTest MethodDeffection Temperature Under Load (1.8 MPa, Unannealed)204°CASTM D648CLTE - Flow208-55cm/cm/°CASTM D666ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms ·cmASTM D257InjectionNominal ValueUnitTest MethodDrying Temperature82.2°C·cDrying Temperature60 to 304°C·cRear Temperature260 to 304°C·cMiddle Temperature260 to 304°C·cFront Temperature260 to 304°C·cProcessing (Melt) Temp43 to 271°C·cMod Temperature56 to 93.3°C·c	Tensile Elongation (Break)	3.5	%	ASTM D638
ImpactNominal ValueUnitTest MethodNotched Izod Impact (23°C, 3.18 mm)80J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPA, Unannealed)204°CASTM D648CLTE - Flow20E-5cm/cm/°CASTM D696ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms·cmASTM D257InjectionNominal ValueUnitTest MethodDrying Temperature82.2°CCDrying Time4.0hr-Rear Temperature260 to 304°C-Middle Temperature260 to 304°C-Front Temperature260 to 304°C-Front Temperature243 to 271°C-Mod Temperature65.6 to 93.3°C-	Flexural Modulus	6890	MPa	ASTM D790
Notched Izod Impact (23°C, 3.18 mm)80//mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)204°CASTM D648CLTE - Flow2.0E-5cm/cm/°CASTM D696ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms·cmASTM D257InjectionNominal ValueUnitTest MethodDrying Temperature82.2°CCDrying Time4.0rcTest MethodRear Temperature260 to 304°CCMiddle Temperature260 to 304°CTest MethodProcessing (Melt) Temp243 to 271°CCMod Temperature6.5 to 93.3°CC	Flexural Strength	207	MPa	ASTM D790
ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)204°CASTM D648CLTE - Flow20E-5cm/cm/°CASTM D696ElectricalNominal ValueUnitTest MethodPolume Resistivity1.0E+15ohms · cmASTM D257InjectionNominal ValueUnitTest MethodDrying Temperature82.2°C·Drying Time4.0hr·Rear Temperature260 to 304°C·Middle Temperature260 to 304°C·Front Temperature630 to 304°C·Front Temperature63 to 304°C·Front Seging (Meth) Temp43 to 271°C·Mod Temperature65 to 93.3°C·	Impact	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unanealed)204°CASTM D648CLTE - Flow2.0E-5cm/cm/°CASTM D696ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms·cmASTM D257InjectionNominal ValueUnitUnitDrying Temperature82.2°CSTM D257Drying Time4.0hrSTM D257Rear Temperature260 to 304°CSTM D257Middle Temperature260 to 304°CSTM D257Processing (Melt) Temp243 to 271°CSTM D257Mod Temperature65.6 to 93.3°CSTM D257	Notched Izod Impact (23°C, 3.18 mm)	80	J/m	ASTM D256
MPa, Unannealed)204°CASTM D648CLTE - Flow2.0E-5cm/cm/°CASTM D696ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms · cmASTM D257InjectionNominal ValueUnit	Thermal	Nominal Value	Unit	Test Method
ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+15ohms·cmASTM D257InjectionNominal ValueUnitCDrying Temperature82.2°CCDrying Time4.0hrCRear Temperature260 to 304°CCMiddle Temperature260 to 304°CCFront Temperature260 to 304°CCProcessing (Melt) Temp243 to 271°CCMold Temperature65.6 to 93.3°CC		204	°C	ASTM D648
Volume Resistivity1.0E+15ohms·cmASTM D257InjectionNominal ValueUnitDrying Temperature82.2°CDrying Time4.0hrRear Temperature260 to 304°CMiddle Temperature260 to 304°CFront Temperature260 to 304°CProcessing (Melt) Temp243 to 271°CMold Temperature65.6 to 93.3°C	CLTE - Flow	2.0E-5	cm/cm/°C	ASTM D696
InjectionNominal ValueUnitDrying Temperature82.2°CDrying Time4.0hrRear Temperature260 to 304°CMiddle Temperature260 to 304°CFront Temperature260 to 304°CProcessing (Melt) Temp243 to 271°CMol Temperature65.6 to 93.3°C	Electrical	Nominal Value	Unit	Test Method
Drying Temperature82.2°CDrying Time4.0hrRear Temperature260 to 304°CMiddle Temperature260 to 304°CFront Temperature260 to 304°CProcessing (Melt) Temp243 to 271°CMold Temperature65.6 to 93.3°C	Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Drying Time4.0hrRear Temperature260 to 304°CMiddle Temperature260 to 304°CFront Temperature260 to 304°CProcessing (Melt) Temp243 to 271°CMold Temperature65.6 to 93.3°C	Injection	Nominal Value	Unit	
Rear Temperature260 to 304°CMiddle Temperature260 to 304°CFront Temperature260 to 304°CProcessing (Melt) Temp243 to 271°CMold Temperature65.6 to 93.3°C	Drying Temperature	82.2	°C	
Middle Temperature260 to 304°CFront Temperature260 to 304°CProcessing (Melt) Temp243 to 271°CMold Temperature65.6 to 93.3°C	Drying Time	4.0	hr	
Front Temperature260 to 304°CProcessing (Melt) Temp243 to 271°CMold Temperature65.6 to 93.3°C	Rear Temperature	260 to 304	°C	
Processing (Melt) Temp243 to 271°CMold Temperature65.6 to 93.3°C	Middle Temperature	260 to 304	°C	
Mold Temperature 65.6 to 93.3 °C	Front Temperature	260 to 304	°C	
	Processing (Melt) Temp	243 to 271	°C	
Back Pressure 0.00 to 0.345 MPa	Mold Temperature	65.6 to 93.3	°C	
	Back Pressure	0.00 to 0.345	MPa	

Screw Speed	30 to 60

rpm

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

# Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

