# AKROMID® B28 GF 50 1 GIT black (5649)

#### Polyamide 6

#### AKRO-PLASTIC GmbH

#### Message:

AKROMID® B28 GF 50 1 GIT black (5649) is a 50% glass fibre reinforced, heat stabilised, easy flowing polyamide 6 with very high stiffness and strength for gas injection technology.

Applications are engineering parts, which are produced by gas injection technology. Furthermore B28 GF 50 1 GIT black (5649) can be used for standard injection moulding for demanding surface quality.

Filer / Reinforcement   Glass Fiber,50% Filler by Weight	General Information							
Additive			Glass Fiber,50% Filler by Weight	Glass Fiber.50% Filler by Weight				
Heat Stabilized High Stiffness High Strength Stiffness High Strength High Steringshill High High Steringshill High Ster								
Heat Stabilized High Stiffness High Strength Stiffness High Strength High Steringshill High High Steringshill High Ster			Good Surface Finish					
High Strength           Uses         Fermion of the parts           Appearance         Black         Frocessing Method         Frocessing Method <td></td> <td></td> <td></td> <td></td> <td></td>								
High Strength           Uses         Fermion of the parts           Appearance         Black         Frocessing Method         Frocessing Method <td colspan="2"></td> <td colspan="5">High Stiffness</td>			High Stiffness					
Uses         Engineering Parts           Appearance         Black           Processing Method         Sas-Assisted Injection Molding Injection Molding Injection Molding           Resin ID (ISO 1043)         PA6 GF50           Physical         Dry         Conditioned         Unit         Test Method           Density (23°C)         1.55         -         g/cm²         ISO 1183           Humidity Absorption - 62% RH (70°C)         1.7         -         %         ISO 1172           Mechanical         Dry         Conditioned         Unit         Test Method           Tensile Modulus         16700         10500         MPa         ISO 527-2/1           Tensile Stress (Break)         235         150         MPa         ISO 527-2/5           Tensile Stress (Break)         3.0         4.5         %         ISO 527-2/5           Tensile Stress (Break)         3.0         4.5         %         ISO 527-2/5           Tensile Stress (Break)         2.0         2.5         KJ/m²         ISO 179/1eA           Charpy Notched Impact         Sco 179/1eA         Sco 179/1eA         Sco 179/1eA           Charpy Unnotched Impact         Sco 179/1eA         In 10         KJ/m²         ISO 179/1eA								
Appearance         Black           Processing Method         Gas-Assisted Injection Molding Injection Molding Injection Molding Injection Molding           Resin ID (ISO 1043)         PA6 GF50           Physical         Dry         Conditioned         Unit         Test Method           Density (23°C)         1.55         - 2         - 3         ISO 1183           Humidity Absorption - 62% RH (70°C)         1.7         2         %         ISO 1110           Reinforcement Content         50         2         %         ISO 1172           Mechanical         Dry         Conditioned         Unit         Test Method           Tensile Stress (Break)         235         150         MPa         ISO 527-2/1           Tensile Strain (Break)         3.0         4.5         %         ISO 527-2/5           Impact         Dry         Conditioned         Unit         Test Method           Charpy Notched Impact Strength (23°C)         20         25         kl/m²         ISO 179/1eA           Charpy Unnotched Impact Strength (23°C)         110         kl/m²         ISO 179/1eU           Thermal         Dry         Conditioned         Unit         Test Method           Helting Temperature <sup>1</sup> 220         Co								
Processing Method         Gas-Assisted Injection Molding Absorption 1 pp. 1 pp. 2 pp. 2 pp. 3	Uses		Engineering Parts					
Pact	Appearance		Black					
Resin ID (ISO 1043)         PA6 GF50           Physical         Dry         Conditioned         Unit         Test Method           Density (23°C)         1.55          g/cm²         ISO 1183           Humidity Absorption - 62% RH (70°C)         1.7          %         ISO 1110           Reinforcement Content         50          %         ISO 1172           Mechanical         Dry         Conditioned         Unit         Test Method           Tensile Modulus         16700         1500         MPa         ISO 527-2/1           Tensile Stress (Break)         235         150         MPa         ISO 527-2/5           Tensile Strain (Break)         3.0         4.5         %         ISO 527-2/5           Impact         Dry         Conditioned         Unit         Test Method           Charpy Notched Impact Strength (23°C)         20         25         k/m²         ISO 179/1eA           Charpy Unnotched Impact Strength (23°C)         110         k/m²         ISO 179/1eU           Thermal         Dry         Conditioned         Unit         Test Method           Melting Temperature 1         220          °C         DIN EN 11357-1			Gas-Assisted Injection Molding					
Physical Dry Conditioned Unit Test Method Density (23°C) 1.55 C 9/cm³ ISO 1183 Humidity Absorption - 628' RH (70°C) 1.7 S 9/cm³ ISO 1110 Reinforcement Content 50 S 9/cm³ ISO 1110 Reinforcement Content 50 S 9/cm³ ISO 1110 Mechanical Dry Conditioned Unit Test Method Tensile Modulus 16700 10500 MPa ISO 527-2/1 Tensile Stress (Break) 235 150 MPa ISO 527-2/5 Tensile Strain (Break) 3.0 4.5 9/cm³ ISO 527-2/5 Impact Dry Conditioned Unit Test Method Charpy Notched Impact Strength (23°C) 25 kJ/m² ISO 179/1eA Charpy Unnotched Impact Strength (23°C) 110 110 110 kJ/m² ISO 179/1eU Thermal Dry Conditioned Unit Test Method Melting Temperature 1 220 Conditioned Unit Test Method Flammability Dry Conditioned Unit Test Method								
Physical Dry Conditioned Unit Test Method Density (23°C) 1.55 C 9/cm³ ISO 1183 Humidity Absorption - 628' RH (70°C) 1.7 S 9/cm³ ISO 1110 Reinforcement Content 50 S 9/cm³ ISO 1110 Reinforcement Content 50 S 9/cm³ ISO 1110 Mechanical Dry Conditioned Unit Test Method Tensile Modulus 16700 10500 MPa ISO 527-2/1 Tensile Stress (Break) 235 150 MPa ISO 527-2/5 Tensile Strain (Break) 3.0 4.5 9/cm³ ISO 527-2/5 Impact Dry Conditioned Unit Test Method Charpy Notched Impact Strength (23°C) 25 kJ/m² ISO 179/1eA Charpy Unnotched Impact Strength (23°C) 110 110 110 kJ/m² ISO 179/1eU Thermal Dry Conditioned Unit Test Method Melting Temperature 1 220 Conditioned Unit Test Method Flammability Dry Conditioned Unit Test Method								
Density (23°C)         1.55          g/cm³         ISO 1183           Humidity Absorption - 62% RH (70°C)         1.7          %         ISO 1110           Reinforcement Content         50          %         ISO 1172           Mechanical         Dry         Conditioned         Unit         Test Method           Tensile Modulus         16700         10500         MPa         ISO 527-2/1           Tensile Stress (Break)         235         150         MPa         ISO 527-2/5           Impact         Dry         Conditioned         Unit         Test Method           Charpy Notched Impact Strength (23°C)         20         25         kJ/m²         ISO 179/1eA           Charpy Unnotched Impact Strength (23°C)         110         110         kJ/m²         ISO 179/1eU           Thermal         Dry         Conditioned         Unit         Test Method           Melting Temperature 1         220          °C         DIN EN 11357-1           Flammability         Dry         Conditioned         Unit         Test Method	Resin ID (ISO 1043)		PA6 GF50					
Humidity Absorption - 62%           RH (70°C)         1.7          %         ISO 1110           Reinforcement Content         50          %         ISO 1172           Mechanical         Dry         Conditioned         Unit         Test Method           Tensile Modulus         16700         10500         MPa         ISO 527-2/1           Tensile Stress (Break)         235         150         MPa         ISO 527-2/5           Tensile Strain (Break)         3.0         4.5         %         ISO 527-2/5           Impact         Dry         Conditioned         Unit         Test Method           Charpy Notched Impact Strength (23°C)         20         25         kJ/m²         ISO 179/1eA           Charpy Unnotched Impact Strength (23°C)         110         110         kJ/m²         ISO 179/1eU           Thermal         Dry         Conditioned         Unit         Test Method           Melting Temperature <sup>1</sup> 220          °C         DIN EN 11357-1           Flammability         Dry         Conditioned         Unit         Test Method	Physical	Dry	Conditioned	Unit	Test Method			
RH (70°C)         1.7          %         ISO 1110           Reinforcement Content         50          %         ISO 1172           Mechanical         Dry         Conditioned         Unit         Test Method           Tensile Modulus         16700         10500         MPa         ISO 527-2/1           Tensile Stress (Break)         235         150         MPa         ISO 527-2/5           Impact         Dry         Conditioned         Unit         Test Method           Charpy Notched Impact Strength (23°C)         20         25         kJ/m²         ISO 179/1eA           Charpy Unnotched Impact Strength (23°C)         110         kJ/m²         ISO 179/1eU           Thermal         Dry         Conditioned         Unit         Test Method           Melting Temperature <sup>1</sup> 220          °C         DIN EN 11357-1           Flammability         Dry         Conditioned         Unit         Test Method	Density (23°C)	1.55		g/cm³	ISO 1183			
Mechanical Dry Conditioned Unit Test Method Tensile Modulus 16700 10500 MPa ISO 527-2/1 Tensile Stress (Break) 235 150 MPa ISO 527-2/5 Tensile Strain (Break) 3.0 4.5 % ISO 527-2/5 Impact Dry Conditioned Unit Test Method Charpy Notched Impact Strength (23°C) 25 25 kJ/m² ISO 179/1eA Charpy Unnotched Impact Strength (23°C) 110 110 kJ/m² ISO 179/1eU Thermal Dry Conditioned Unit Test Method Melting Temperature 1 220 Conditioned Unit Test Method		1.7		%	ISO 1110			
Tensile Modulus 16700 10500 MPa ISO 527-2/1 Tensile Stress (Break) 235 150 MPa ISO 527-2/5 Tensile Strain (Break) 3.0 4.5 % ISO 527-2/5 Impact Dry Conditioned Unit Test Method  Charpy Notched Impact Strength (23°C) 100 110 110 110 110 110 110 110 110 11	Reinforcement Content	50		%	ISO 1172			
Tensile Stress (Break) 235 150 MPa ISO 527-2/5 Tensile Strain (Break) 3.0 4.5 % ISO 527-2/5 Impact Dry Conditioned Unit Test Method  Charpy Notched Impact Strength (23°C) 25  In 20  In	Mechanical	Dry	Conditioned	Unit	Test Method			
Tensile Strain (Break) 3.0 4.5 % ISO 527-2/5  Impact Dry Conditioned Unit Test Method  Charpy Notched Impact Strength (23°C) 20 25 kJ/m² ISO 179/1eA  Charpy Unnotched Impact Strength (23°C) 110 100 kJ/m² ISO 179/1eU  Thermal Dry Conditioned Unit Test Method  Melting Temperature 1 220 °C DIN EN 11357-1  Flammability Dry Conditioned Unit Test Method	Tensile Modulus	16700	10500	MPa	ISO 527-2/1			
Impact Dry Conditioned Unit Test Method  Charpy Notched Impact Strength (23°C) 25 kJ/m² ISO 179/1eA  Charpy Unnotched Impact Strength (23°C) 110 110 kJ/m² ISO 179/1eU  Thermal Dry Conditioned Unit Test Method  Melting Temperature 1 220 °C DIN EN 11357-1  Flammability Dry Conditioned Unit Test Method	Tensile Stress (Break)	235	150	MPa	ISO 527-2/5			
Charpy Notched Impact Strength (23°C) 20 25 kJ/m² ISO 179/1eA  Charpy Unnotched Impact Strength (23°C) 110 110 kJ/m² ISO 179/1eU  Thermal Dry Conditioned Unit Test Method  Melting Temperature 1 220 Conditioned Unit Test Method  Flammability Dry Conditioned Unit Test Method	Tensile Strain (Break)	3.0	4.5	%	ISO 527-2/5			
Strength (23°C) 20 25 kJ/m² ISO 179/1eA  Charpy Unnotched Impact Strength (23°C) 110 110 kJ/m² ISO 179/1eU  Thermal Dry Conditioned Unit Test Method  Melting Temperature 1 220 Conditioned Unit Test Method  Flammability Dry Conditioned Unit Test Method	Impact	Dry	Conditioned	Unit	Test Method			
Strength (23°C)110110kJ/m²ISO 179/1eUThermalDryConditionedUnitTest MethodMelting Temperature 1220°CDIN EN 11357-1FlammabilityDryConditionedUnitTest Method		20	25	kJ/m²	ISO 179/1eA			
Thermal Dry Conditioned Unit Test Method  Melting Temperature 1 220 Conditioned Unit Test Method  Flammability Dry Conditioned Unit Test Method	Charpy Unnotched Impact							
Melting Temperature <sup>1</sup> 220 °C DIN EN 11357-1  Flammability Dry Conditioned Unit Test Method		110			ISO 179/1eU			
Flammability Dry Conditioned Unit Test Method		Dry	Conditioned		Test Method			
•	Melting Temperature <sup>1</sup>	220		°C	DIN EN 11357-1			
Burning Rate <sup>2</sup> (1.00 mm) < 100 mm/min FMVSS 302		Dry	Conditioned	Unit	Test Method			
	Burning Rate <sup>2</sup> (1.00 mm)	< 100		mm/min	FMVSS 302			

Flame Rating (0.800 mm)	НВ	 UL 94
NOTE		
1.	10 K/min, DSC	
2.	>1 mm	

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## 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

