TECHNYL®

TECHNYL® ALLOY KC 216 V12 BLACK

TECHNICAL DATA SHEET

Revised: August, 2017

TECHNYL® ALLOY KC 216 V12 Black is a grade based on a blend of polyamide 6 and acrylonitrile butadiene styrene, reinforced with 12% of glass fiber for injection moulding. This grade offers high mechanical properties, good dimensional stability and good processability. It is a synergistic blend material between Polyamide 6 and ABS with an ideal property combination, meaning that it has dual characteristics between semi-crystalline and amorphous polymers.

GENERAL

Material Status	• Commercial: Discontinued	
Availability	• Africa & Middle East • Asia Pacific	• Europe
Filler / Reinforcement	• Glass Fiber, 12% Filler by Weight	
Key Benefits	• Good Dimensional Stability	• Good Mold Release
Applications	• Automotive applications • Care & life style appliances • Consumer and Industrial applications	• Kitchen appliances • Power tool housings
Certification/Compliance	• EC 1907/2006 (REACH)	
RoHS Compliance	• RoHS Compliant	
Colors Available	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA6+ABS-GF12	

PROPERTIES

Typical values of properties are for Black grades

Physical	Dry	Unit	Test Method
Water Absorption (24 hr, 23°C)	1.0	%	ISO 62
Density	1.18	g/cm³	ISO 1183/A

Mechanical	Dry	Unit	Test Method
Tensile Modulus (23°C)	4800	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	96	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.3	%	ISO 527-2
Flexural Modulus (23°C)	4300	MPa	ISO 178
Flexural Stress (23°C)	160	MPa	ISO 178
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.0	kJ/m²	
23°C	7.0	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	50	kJ/m²	
23°C	50	kJ/m²	

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Mechanical	Dry	Unit	Test Method
Notched Izod Impact Strength (23°C)	8.0	kJ/m²	ISO 180
Unnotched Izod Impact Strength (23°C)	40	kJ/m²	ISO 180/1U

Thermal	Dry	Unit	Test Method
Heat Deflection Temperature			ISO 75-2/Bf
0.45 MPa, Unannealed	200	°C	
Melting Temperature	220	°C	ISO 11357-3

Electrical	Dry	Unit	Test Method
Comparative Tracking Index (Solution A)	575	V	IEC 60112

PROCESSING

Injection	Dry	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.20	%
Rear Temperature	235 to 240	°C
Middle Temperature	240 to 250	°C
Front Temperature	250 to 260	°C
Mold Temperature	70 to 90	°C

Injection Notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point mini -20°C. Recommended time 2-4h

Injection Advice:

- For reinforced polyamides, Solvay recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered.
- The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

DISCLAIMER

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SAFETY INFORMATION

Detailed information regarding safety are available on the safety data sheet (SDS). SDS is sent with the first material order or available by contacting our customer services

REGULATIONS COMPLIANCE

This product is not intended to be used for the following regulated market: food contact, drinking water, toys, cosmetics or medical devices.

This grade complies with ROHS Directive 2011/65/EU and 2015/863 as amended.

Grades produced or imported in Europe comply with REACH directive 1907/2006/EC as amended.

CUSTOMER SERVICES

Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

You can find more information on Solvay Product range on our internet product finder at the following address: http://www.technyl.com

Notes

Typical properties: these are not to be construed as specifications.