

TECHNYL® ALLOY KC 246 Natural is an unfilled grade based on blend of polyamide 6 and acrylonitrile butadiene styrene (PA6 + ABS), impact modified, for injection moulding. This grade offers high mechanical properties, good dimensional stability and good processability. This grade offers an excellent impact with an ideal combination between stiffness and toughness.

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: Active	
Availability	• Africa & Middle East • Asia Pacific	• Europe
Key Benefits	• High Impact Resistance	
Applications	• Cable ties • Furnitures	• Sports equipment • Structural and Casing parts
Certification/Compliance	• EC 1907/2006 (REACH)	
RoHS Compliance	• RoHS Compliant	
Colors Available	• Black • Grey	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA6+ABS	

PROPERTIES

Typical values of properties are for Natural grades

Physical	Dry	Conditioned	Unit	Test Method
Water Absorption (24 hr, 23°C)	0.90		%	ISO 62
Density	1.08		g/cm³	ISO 1183/A
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	2250		MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	53		MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	94		%	ISO 527-2
Flexural Modulus (23°C)	2150		MPa	ISO 178
Charpy Notched Impact Strength (23°C)	63		kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break			ISO 179/1eU
Notched Izod Impact Strength (23°C)	48		kJ/m²	ISO 180

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	105		°C	ISO 75-2/Bf
1.8 MPa, Unannealed	70		°C	ISO 75-2/Af
Melting Temperature	225		°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (Solution A)	600		V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.8 mm)	HB			UL 94
Glow Wire Flammability Index				IEC
0.8 mm	750		°C	60695-2-12
1.6 mm	650		°C	
3.2 mm	650		°C	

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	60 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 unfilled polyamides, Solvay recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and it is in no way binding. This information must on no account be used as a substitutive for necessary prior tests which alone can ensure that a product is suitable for a given use. ANY WARRANTY OF PRODUCT PERFORMANCE, MERCHANDABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorizations. Users are requested to check that they are in possession of the latest version of this document, and Solvay is at their disposal to supply any additional information.

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

Notes

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