AKRO COMPOUNDS

Compound No.: **8945**

AKROLOY® PRELIMINARY
NEXT PA CF 40 1 black (8945)

PA66+PA6I/6T CF40

AKROLOY NEXT® PA CF 40 1 black (8945) is a 40% carbon fiber reinforced, semi-aromatic polyamide blend with an improved carbon footprint. It is characterised by very high stiffness and impact strength even in conditioned state. Furthermore, it convinces through very good weld line strength. It is therefore perfectly suitable for mechanically high stressed parts, for example in sports and leisure with demanding requirements for dimensional stability.

Features

heat stabilised 130 | recycled content | metal substitution

Properties

Modulus	Strength	Impact
33.000 MPa	**300** MPa	**75** kJ/m²

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**33000 MPa** **28500 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**300 MPa** **265 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**1,7 %** **1,9 %**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned	**75 kJ/m²** **80 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m.	**10 kJ/m²**

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	**235 °C**

Melting temperature ISO 11357-3	DSC, 10K/min	**250 °C**
Coefficient of linear thermal expansion ISO 11359-1/2	23°C to 80°C | parallel 23°C to 80°C | transverse	**0,4 10^{-4}/K** **0,7 10^{-4}/K**
Thermal conductivity DIN 52612		**0,45 W/mK**

Flammability

Flammability UL 94	0,8 mm Wall thickness	**HB Class**

General Properties

Density ISO 1183	23°C	**1,35 g/cm^3**
Humidity absorption ISO 1110	70°C, 62% r.H.	**1,4 - 1,6 %**
Molding shrinkage ISO 294-4	flow transverse	**0,1 - 0,3 %** **0,3 - 0,5 %**

Electrical Properties

Surface resistivity IEC 62631-3-2	d.a.m. conditioned	**10^3 Ω** **10^3 Ω**

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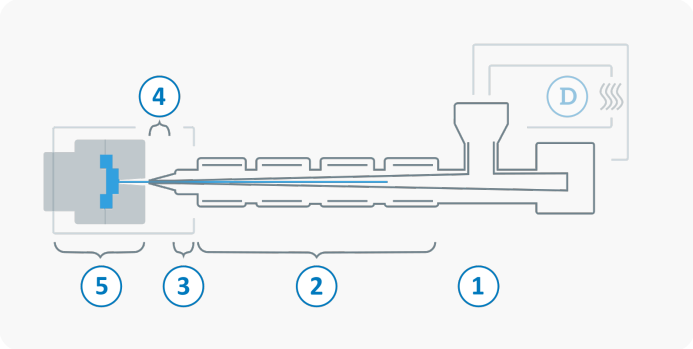
+852-6957-5415 (HongKong)

Processing

The values mentioned are recommendations. We only recommend desiccant / dry air dryers or vacuum dryers. Too long a drying time and the resulting residual moisture content below the lower limit can lead to filling problems and surface defects. The specified drying time refers to closed and undamaged bagged material. When processing from previously opened bags or from octabins with polyolefin inliners, a longer drying time may be necessary. It is recommended to check the residual moisture content after the drying process.



D	Drying time	0 - 4 h
	Drying temperature (τ <= -30°C)	80 °C
	Processing moisture	0,02 - 0,1 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	260 - 310 °C
3	Nozzle temperature	270 - 310 °C
4	Melt temperature	280 - 310 °C
5	Mold temperature	90 - 130 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min