

AKROLOY®

PARA GF 50 HU natural (8595)

PARA GF50

AKROLOY® PARA GF 50 HU natural (8595) is a 50% glass fibre reinforced polyarylamid with very high stiffness and strength, even in conditioned state owing to its lower moisture uptake. Furthermore, the material shows very good flowability and surface properties. It is perfectly suitable for parts where dimensional stability is required. Besides, it can be used as an alternative for aluminium and zinc diecast alloys. The material is listed at UL in all colors.

Features

reduced moisture easy flow metal substitution

Regulatory



Properties

Modulus

19.000 MPa

Strength

310 MPa

Impact

80 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

19000 MPa

1 mm/min | conditioned

19000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

310 MPa

5 mm/min | conditioned

280 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,3 %

5 mm/min | conditioned

2,3 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

20000 MPa

2 mm/min | conditioned

20000 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

445 MPa

2 mm/min | conditioned

410 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

80 kJ/m²

23°C | conditioned

100 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

19 kJ/m²

23°C | conditioned

18 kJ/m²

Thermal Properties

RTI electrical UL 746B	0,8mm Wall thickness	65 °C
	1,6mm Wall thickness	65 °C
	3,2mm Wall thickness	65 °C
RTI impact UL 746B	0,8mm Wall thickness	65 °C
	1,6mm Wall thickness	65 °C
	3,2mm Wall thickness	65 °C
RTI strength UL 746B	0,8mm Wall thickness	65 °C
	1,6mm Wall thickness	65 °C
	3,2mm Wall thickness	65 °C
Temperature of deflection under load HDT/A ISO 75	1,8 MPa	230 °C
Temperature of deflection under load HDT/C ISO 75	8 MPa	200 °C
Melting temperature ISO 11357-3	DSC, 10K/min	238 °C

Flammability

Flammability UL 94	0,8 mm Wall thickness	HB Class
	1,6 mm Wall thickness	HB Class
	3,2 mm Wall thickness	HB Class
HWI UL 746A	0,8 mm Wall thickness	4 PLC
	1,6 mm Wall thickness	2 PLC
	3,2 mm Wall thickness	2 PLC
HAI UL 746A	0,8 mm Wall thickness	0 PLC
	1,6 mm Wall thickness	0 PLC
	3,2 mm Wall thickness	0 PLC
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,65 g/cm ³
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Humidity absorption

ISO 1110

70°C, 62% r.H.

0,7 - 0,9 %

Water absorption

ISO 62

23°C, saturated

3,5 %

Molding shrinkage

ISO 294-4

flow

0,1 - 0,2 %

transverse

0,2 - 0,4 %

Electrical Properties

Comparative tracking index

IEC 60112

Test liquid A

600 V

Dielectric strength

IEC 60243

3 mm

31 kV/mm

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	4 - 12 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	80 - 90 °C
	Processing moisture	0,02 - 0,1 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	250 - 300 °C
3	Nozzle temperature	270 - 300 °C
4	Melt temperature	270 - 300 °C
5	Mold temperature	120 - 160 °C
→	Holding pressure, spec.	300 - 1500 bar
←	Back pressure, spec.	50 -150 bar
	Injection speed	high
	Screw speed	8 - 10 m/min

Diagrams

