

AKROLEN®

PP GFM 25/15 LA black (3143)

PP (GF25+MD15)

AKROLEN® PP GFM 25/15 LA black (3143) is a 25% glass fibre reinforced, 15% mineralfilled, laser markable polypropylene with good surface and dimensional stability. This material is mainly used for thin wall housings for electronic parts in the automotive industry.

Features

laser markable surface modified low warpage

Properties

Modulus

6.500 MPa

Strength

Na

Impact

45 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

6500 MPa

Tensile stress at break

ISO 527-2

50 mm/min | d.a.m.

75 MPa

Tensile strain at break

ISO 527-2

50 mm/min | d.a.m.

3,5 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

6600 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

105 MPa

Flexural strain at break

ISO 178

2 mm/min | d.a.m.

3,5 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

45 kJ/m²

-30°C | d.a.m.

45 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

10 kJ/m²

Izod impact strength

ISO 180/1A

23°C | d.a.m.

10 kJ/m²

Ball indentation hardness

ISO 2039-1

358N/30s | d.a.m.

100 MPa

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

150 °C

Temperature of deflection under load HDT/B

ISO 75

0,45 MPa

163 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

167 °C

Coefficient of linear thermal expansion

ISO 11359-1/2

23°C to 80°C | parallel

0,2 10⁻⁴/K

23°C to 80°C | transverse

1,25 10⁻⁴/K

Flammability

Flammability

UL 94

1,6 mm Wall thickness

HB Class

Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

General Properties

Density

ISO 1183

23°C

1,21 g/cm³

Molding shrinkage

ISO 294-4

flow

0,1 - 0,3 %

transverse

0,4 - 0,6 %

Electrical Properties

Comparative tracking index

IEC 60112

Test liquid A

600 V

Dielectric strength

IEC 60243

3 mm

18 kV/mm

Rheological Properties

MVR

ISO 1133

230°C/2,16kg

13,5 cm³/10 min

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 - 3 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	80 °C
	Processing moisture	0,1 %
1	Feed section	40 - 80 °C
2	Temperature Zone 1 - Zone 4	200 - 255 °C
3	Nozzle temperature	200 - 255 °C
4	Melt temperature	215 - 265 °C
5	Mold temperature	30 - 80 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 100 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min