



HiPrene[®] ALC12B

Long Carbon Fiber reinforced PA6 Compound-Black Color

Product Description

HiPrene[®] ALC12B is 20% Long Carbon Fiber reinforced polyamide-6 compound. This material combines excellent mechanical properties with low density and excellent dimensional stability. It has been designed for Weight-reduction in Automotive and other Industrial applications. This grade is available in black color.

Product Characteristic

Status	Commercial: Active
Test Method Used	ASTM
Availibility	Europe
Features	Long Carbon Fiber Reinforced Low Specific Gravity High Stiffness
Typical Customer Applications	Automotive Parts/Industrial Parts

Typical Properties

Physical	Symbol	Test Method	Unit	Value
Specific Gravity	ρ	ASTM D792	g/cm ³	1,17
Mechanical	Symbol	Test Method	Unit	Value
Tensile Stress @ Yield	σ_m	ASTM D638	MPa	195
Tensile Strain @ Break	ϵ_{tB}	ASTM D638	%	1,5
Flexural Modulus ¹ @ 23°C	E_f	ASTM D790	MPa	11500
Impact	Symbol	Test Method	Unit	Value
IZOD Impact Strength @ 23°C	$a_{IN23^\circ C}$	ASTM D256	kJ/m ²	10
IZOD Impact Strength @ -30°C	$a_{IN-30^\circ C}$	ASTM D256	kJ/m ²	9
Hardness	Symbol	Test Method	Unit	Value
Rockwell Hardness (R-Scale)	HR-R	ASTM D785	-	122
Thermal	Symbol	Test Method	Unit	Value
Temperature of Deflection under Load (HDT)	T_f	ASTM D648	°C	215
Ash Content @ 600°C	Ash _{600°C}	GS Method	%	20

¹ feed rate 2 mm/min

Notes: Typical properties; not to be constructed as specification

Processing Techniques

The actual conditions depends on the type of equipment used.

Injection Moulding

HiPrene ALC12B is easy to process with standard injection moulding machines. To avoid residual humidity from transport or storage, the material should be pre-dried approximately 2h at 80°C. Following moulding parameters should be used as guidelines:

Dry Condition : 100°C, 4hr

Injection Temp.

Feeding : 200~250

Rear : 255~265

Middle : 265~275

Front : 275~285

Nozzle : 275~285

Melt : 275~285

Mold : 50~70

Storage

This material should be stored in dry conditions, protected from sunlight and at temperatures below 50 °C.

Contact

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