

XECARB[®] PPA-CF **3DF**

20% carbon fiber reinforced PPA, 52% renewable content

XECARB[®] PPA-CF, the filament developed on a bio-based PPA polymer base and reinforced with 20% carbon fibre. This material combines high mechanical and thermal performance, dimensional stability and chemical resistance, enabling the production of lightweight, durable, and functional parts for automotive, aerospace, and industrial applications.

HIGHLIGHTS



Mechanical
performane



Heat
resistance



Chemical
resistance



Bio-based

Material Properties

	Test Condition	Standard	Unit	Dam / Cond.
Diameter			mm	1,75
Density		ISO 1183	g/cm ³	1,21
Hardness	Shore D, 15s	ISTR02L	ShD	86

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Thermal Properties

	Test Condition	Standard	Unit	Dam / Cond.
Melting point	10 °C/min	ISO 11357	°C	265
Glass transition temperature	10 °C/min	ISO 11357	°C	80
HDT – heat deflection temperature	1,80 MPa a 120 °C/h	ISO 75	°C	205
Melt Flow Rate	275°C / 5kg	ISO 1133	g/10min	6
Melt Volume Rate	275°C / 5kg	ISO 1133	cm³/10min	6

Suggested Printed Settings

	Unit	Value
Nozzle temperature	°C	280-300
Bed temperature	°C	90-110
Nozzle type		Hardened Steel
Nozzle diameter	mm	≥0,4
Bed type		Glass/PEI
Adhesive		Suggested
Closed chamber		Suggested

Drying Recommendations

	Unit	Value
Drying temperature	°C	80-100
Drying time	h	6-8

Our advice does not release you from the obligation to verify the information currently provided – especially that contained in our safety data and technical information sheets, and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the coloring.

Processing note

Under the recommended processing condition small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

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