MATERIAL WIZARD TM

MAGIC SOLUTIONS REAL RESULTS

Exablend® POK CF20 TRM

Dimensional Precision. Chemical Confidence.

Technical DataSheet | Supplied by Material Wizard

Exablend® POK CF20 TRM is a polymer based on a carbon monoxide–ethylene copolymer with a highly regular crystalline structure that provides exceptional resistance to both chemical and mechanical degradation. Due to its high elongation at break, the material maintains ductility even at sub-zero temperatures, while its stable modulus and low moisture uptake ensure dimensional stability under fluctuating humidity and thermal cycling.

The crystallization behavior of POK enables fast injection molding cycles with minimal shrinkage-related distortion. Its outstanding barrier properties against hydrocarbons and gases make Exablend® POK CF20 TRM a reliable choice for sealing components and parts in direct contact with fuels. Unlike polyamides, this material does not require post-conditioning and retains its mechanical properties even after prolonged exposure to aggressive environments.

Exablend® POK CF20 TRM is recommended for use in applications requiring a unique combination of impact toughness, chemical resistance, and dimensional precision—ranging from fuel system components and electrical connectors to high-accuracy enclosures exposed to variable climatic conditions.

Product Type	Polyketone (POK) > POK+CF	
Applications/ Recommended for	Injection Molding >	Fuel System Components
Key Features	Excellent chemical resistance	
	High toughness and ductility	
	Low moisture uptake	
	Fast crystallization and short cycle times	
	Outstanding barrier performance	
	Hydrolytic stability	
	Good dimensional accuracy	

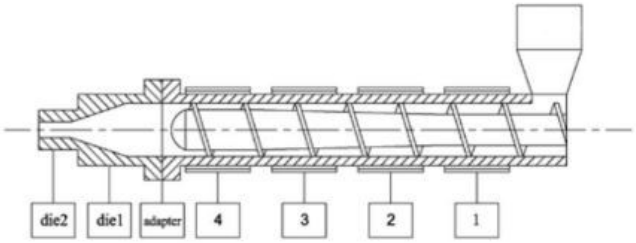
Exablend® POK CF20 TRM Typical Properties

Physical	Value & Unit	Test Condition	Test Method
Density	1.30 g/cm3	At 23°C	ISO 1183
Carbon fiber content	20%		internal
Melt Volume Flow Rate (MVR)	9 g/10 min	At 240°C, 2.16kg	ISO 1133
Linear Mold Shrinkage, Flow/Transverse	0.4/1.1 %		ISO 294
Surface Resistivity	~10^3 Ω		ISO 3915
Water Absorption	0.4 %	23°C, 50% RH	ISO 62
Mechanical	Value & Unit	Test Condition	Test Method
Tensile Modulus	12700 MPa	At 23°C	ISO 527-2
Tensile Strength	155 MPa	At 23°C	ISO 527-2
Tensile Strain at Break	2%	At 23°C	ISO 527-2
Impact Strength, Unnotched Charpy	40 kJ/m2	At 23°C	ISO 179/1
Thermal	Value & Unit	Test Condition	Test Method

HDT	213°C	1.8 MPa	ISO 75-2
Melting Temperature	220°C		DIN 53765
Glass Transition Temperature	15°C		DIN 53765
CLTE (Flow / Transverse)	5.8E-5 / 8.8E-5 cm/cm/°C	23–80°C	ISO 11359
Thermal Conductivity	0.39 (⊥) / 0.66 (∥) W/m·K		DIN EN 821

Processing Recommendations

Processing Conditions > Injection Molding:



	Zone1	Zone2	Zone3	Zone4	Adaptor	Die1	Die2
°C	220	225	230	235	240	245	250

Processing Recommendations > Drying:

Our materials are supplied pre-dried in moisture-guarded bags. However, dry materials will rapidly absorb moisture when exposed to the atmosphere. For recyclable products, it must be dried before processing. It is recommended to dry the material at 80 ºC for 2-3 hours in a circulating air or dehumidified air dryer. The moisture content must be lower than 0.2% before and during processing.

Disclaimer

Standard Disclaimer

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and are subject to change without notice. It is expressly understood and agreed that you assume and hereby release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent. Typical Properties data is provided as general information only. Property values are approximate and are not part of the product specifications.

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