

CELSTRAN® PP-GF40-02 AD3019 Black - PP

Description

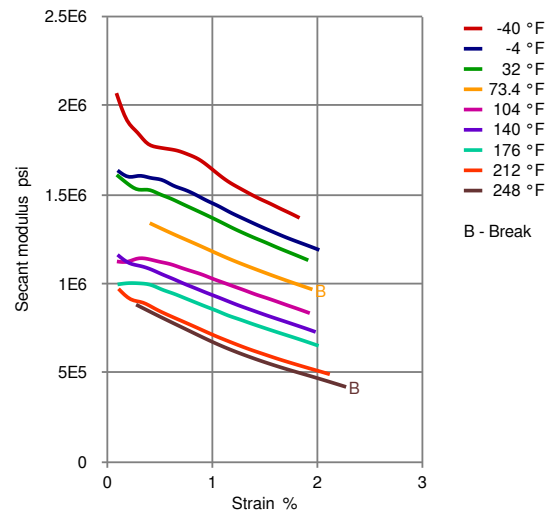
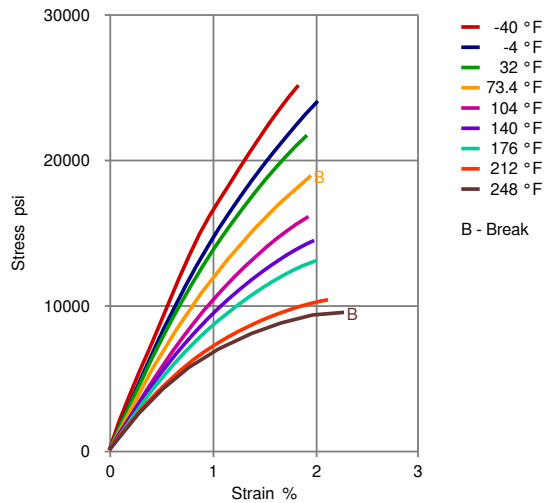
40% long strand glass fiber reinforced polypropylene, black. UV resistant.

Physical properties	Value	Unit	Test Standard
Density	75.5	lb/ft ³	ISO 1183
Molding shrinkage, parallel (flow)	0.2	%	ISO 294-4, 2577
Molding shrinkage, transverse normal	0.2 - 0.4	%	ISO 294-4, 2577
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	1.29E6	psi	ISO 527-1, -2
Tensile stress at break, 5mm/min	18900	psi	ISO 527-1, -2
Tensile strain at break, 5mm/min	2	%	ISO 527-1, -2
Flexural modulus, 23°C	1.34E6	psi	ISO 178
Flexural strength, 23°C	29000	psi	ISO 178
Charpy impact strength, 23°C	30.9	ft-lb/in ²	ISO 179/1eU
Charpy notched impact strength, 23°C	11.9	ft-lb/in ²	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	316	°F	ISO 75-1, -2

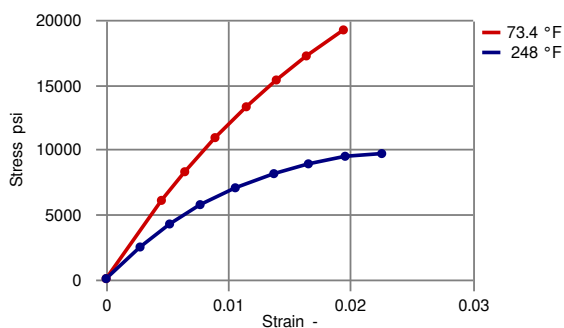
Diagrams

Stress-strain

Secant modulus-strain



True Stress-strain



No Yield at 23°C, 120°C
Poisson's Ratio: 0.449

Typical injection moulding processing conditions

Pre Drying	Value	Unit
Necessary low maximum residual moisture content	0.2	%
Drying time	2	h
Drying temperature	194 - 212	°F
Temperature	Value	Unit
Feeding zone temperature	68 - 122	°F
Zone1 temperature	410 - 446	°F
Zone2 temperature	428 - 464	°F
Zone3 temperature	446 - 482	°F
Zone4 temperature	446 - 482	°F
Nozzle temperature	446 - 482	°F
Melt temperature	446 - 482	°F
Mold temperature	86 - 158	°F
Hot runner temperature	446 - 518	°F
Pressure	Value	Unit
Back pressure max.	30	bar
Speed	Value	
Injection speed	slow	
Screw Speed	Value	Unit
Screw speed diameter, 40mm	50	RPM
Screw speed diameter, 55mm	35	RPM
Screw speed diameter, 75mm	25	RPM

Characteristics

Special Characteristics	Auto spec approved, Heat resistant
Product Categories	Glass reinforced
Processing	Injection molding
Delivery Form	Pellets



Other Approvals

OEM	Specification
GM	GMW16272P-PP-GF40

General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

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