

## FORTRON® FX4382T1 - PPS

### Description

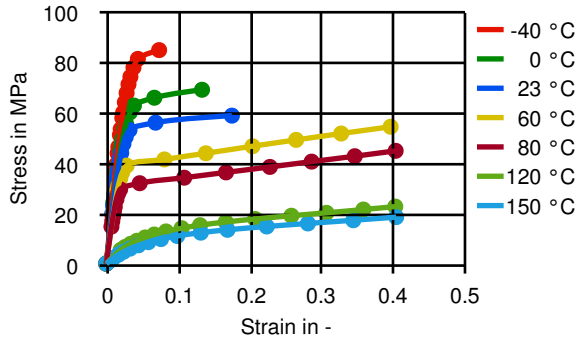
Fortron FX4382T1 is an impact-modified, unreinforced, extrusion/injection molding grade offering high tensile elongation.

Physical properties	Value	Unit	Test Standard
Density	1250	kg/m <sup>3</sup>	ISO 1183
Molding shrinkage, parallel	0.9 - 1.4	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 - 1.4	%	ISO 294-4, 2577
Water absorption, 23°C-sat	0.035	%	ISO 62
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2300	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	50	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	25	%	ISO 527-2/1A
Flexural modulus, 23°C	2400	MPa	ISO 178
Charpy impact strength, 23°C	NB	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	40	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	10	kJ/m <sup>2</sup>	ISO 179/1eA
Compressive modulus	2260	MPa	ISO 604
Compressive stress at 1% strain	22	MPa	ISO 604
Compressive stress at 6% strain	69.5	MPa	ISO 604
Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	100	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	0.6	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	0.77	E-4/°C	ISO 11359-2
Electrical properties	Value	Unit	Test Standard
Volume resistivity	5E14	Ohm*m	IEC 60093

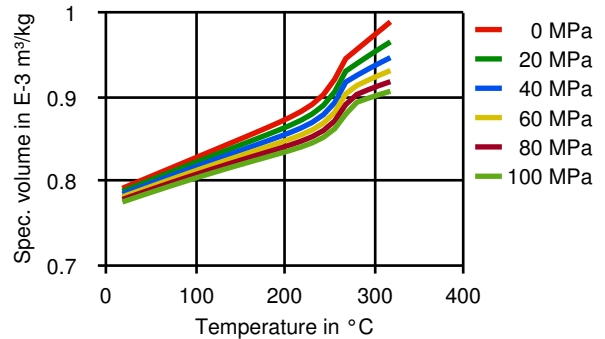
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## Diagrams

True Stress-strain



Moldflow Specific volume-temperature (pvT)



## Typical injection moulding processing conditions

	Value	Unit	Test Standard
<b>Pre Drying</b>			
Necessary low maximum residual moisture content	0.02	%	-
Drying time	3 - 4	h	-
Drying temperature	100	°C	-
<b>Temperature</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Hopper temperature	20 - 30	°C	-
Feeding zone temperature	75 - 85	°C	-
Zone1 temperature	300 - 310	°C	-
Zone2 temperature	305 - 315	°C	-
Zone3 temperature	310 - 320	°C	-
Zone4 temperature	310 - 320	°C	-
Nozzle temperature	315 - 320	°C	-
Melt temperature	315 - 320	°C	-
Mold temperature	135 - 150	°C	-
Hot runner temperature	315 - 320	°C	-
<b>Pressure</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Back pressure max.	35	bar	-
<b>Speed</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Injection speed	slow-medium	-	-
<b>Screw Speed</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Screw speed diameter, 25mm	120	RPM	-
Screw speed diameter, 40mm	75	RPM	-
Screw speed diameter, 55mm	50	RPM	-

## Other text information

### Pre-drying

Yes

### Injection molding

Drying - alternate: 82°C overnight.

## Characteristics

### Product Categories

Impact modified

### Contact Information

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### 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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