

## FORTRON® MT9205C4 | PPS | Medical Technology

### Description

Fortron MT9205C4 is an unfilled grade with a low melt viscosity used for custom compounding and extrusion. It demonstrates an excellent chemical resistance and thermal stability. Components made with this base resin may be used for medical, dental, pharmaceutical, and certain food handling applications. Fortron MT9205C4 is in compliance with ISO 10993, USP Class VI, and is included in the Fortron Drug and Device Master Files at the FDA. It complies with the FDA Food Contact Notification (FCN-No. 40) for repeat-use applications.

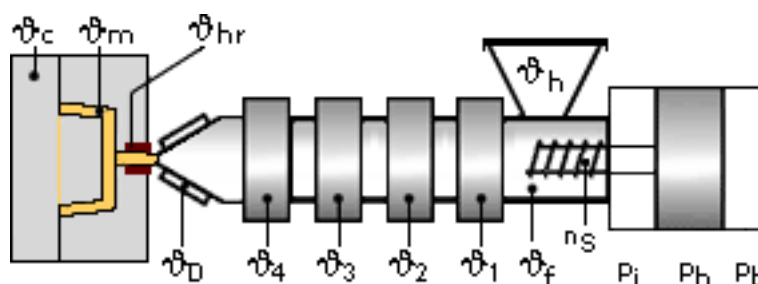
Physical properties	Value	Unit	Test Standard
Density	<b>1350</b>	kg/m <sup>3</sup>	ISO 1183
Water absorption (23°C-sat)	<b>0.02</b>	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	<b>4000</b>	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	<b>65</b>	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	<b>2</b>	%	ISO 527-2/1A
Flexural modulus (23°C)	<b>3900</b>	MPa	ISO 178
Flexural strength (23°C)	<b>120</b>	MPa	ISO 178
Notched impact strength (Izod) @ 23°C	<b>2.0</b>	kJ/m <sup>2</sup>	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	<b>280</b>	°C	ISO 11357-1,-2,-3
Glass transition temperature (10°C/min)	<b>90</b>	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	<b>115</b>	°C	ISO 75-1/-2
DTUL @ 8.0 MPa	<b>95</b>	°C	ISO 75-1/-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity - 1 MHz	<b>3.2</b>	-	IEC 60250
Volume resistivity	<b>1E13</b>	Ohm*m	IEC 60093

### Typical injection moulding processing conditions



#### Pre Drying:

#### Necessary low maximum residual moisture content: 0.02%

FORTRON should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< - 30° C. The time between drying and processing should be as short as possible.

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For subsequent storage the material should be stored dry in the dryer until processed (<= 60 h).

**Drying time: 3 - 4 h**

**Drying temperature: 110 - 120 °C**

### Temperature:

	ϑ <sub>Manifold</sub>	ϑ <sub>Mold</sub>	ϑ <sub>Melt</sub>	ϑ <sub>Nozzle</sub>	ϑ <sub>Zone4</sub>	ϑ <sub>Zone3</sub>	ϑ <sub>Zone2</sub>	ϑ <sub>Zone1</sub>	ϑ <sub>Feed</sub>	ϑ <sub>Hopper</sub>
min (°C)	310	140	310	300	310	310	300	290	60	20
max (°C)	320	160	320	310	320	320	310	300	80	30

### Pressure:

	Inj press	Hold press	Back pressure
min (bar)	400	300	0
max (bar)	800	600	30

### Speed:

**Injection speed: fast**

### Screw speed

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	-	120	75	50	-

## 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.

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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 (+49 (0) 69 30516299 for Europe and +1 859-372-3244 for the Americas) 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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