

Ultem* Resin 3452

Europe-Africa-Middle East: COMMERCIAL

45% Glass fiber and mineral filled, enhanced flow Polyetherimide (Tg 217C) with enhanced dimensional stability. ECO Conforming, UL94 V0 and 5VA listing in recognized colors.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, break, 50 mm/min	100	MPa	ISO 527
Tensile Strain, break, 50 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	12500	MPa	ISO 527
Flexural Stress, break, 2 mm/min	150	MPa	ISO 178
Flexural Modulus, 2 mm/min	12000	MPa	ISO 178
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	14	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	13	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	14	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	14	kJ/m ²	ISO 179/1eU
THERMAL			
CTE, 23°C to 80°C, flow	1.9E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	3.6E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	205	°C	ISO 306
Vicat Softening Temp, Rate B/120	205	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	207	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	200	°C	ISO 75/Ae
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.25	%	SABIC Method
Density	1.66	g/cm ³	ISO 1183

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23±176;C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Melt Volume Rate, MVR at 360°C/5.0 kg	8	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	>1.E+13	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.6	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.01	-	IEC 60250
Dissipation Factor, 1 MHz	0.015	-	IEC 60250
Comparative Tracking Index	125	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.7	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	0.77	mm	UL 94
UL Recognized, 94-5VA Rating (3)	3	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	150	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	370 - 410	°C
Nozzle Temperature	360 - 410	°C
Front - Zone 3 Temperature	370 - 420	°C
Middle - Zone 2 Temperature	360 - 410	°C
Rear - Zone 1 Temperature	350 - 400	°C
Hopper Temperature	80 - 120	°C
Mold Temperature	140 - 180	°C

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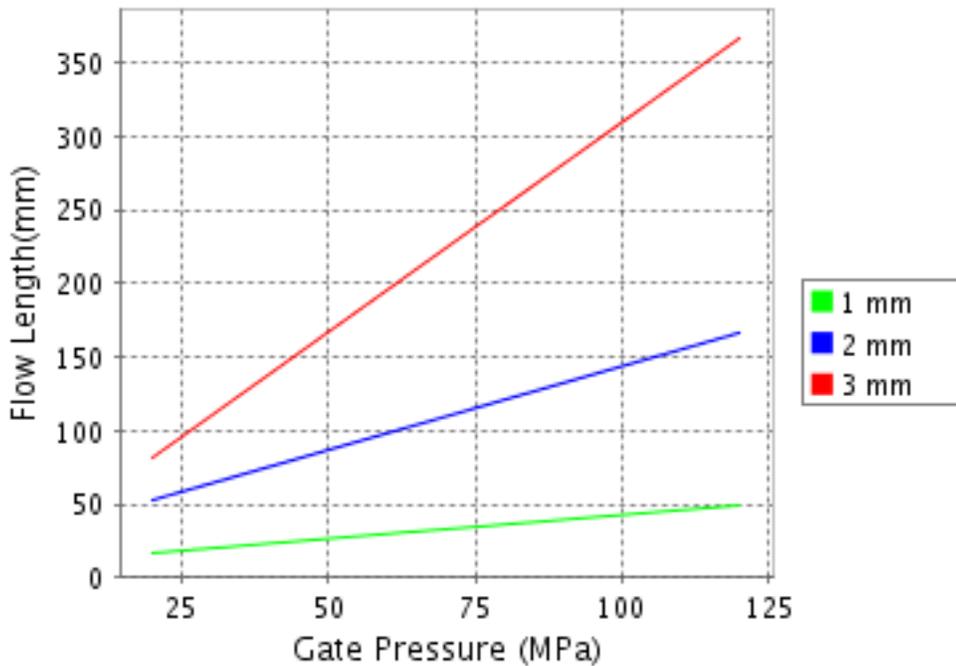
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

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Melt Temperature : 390°C

Mold Temperature : 160°C



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

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