

Ultem* Resin HU2100

Americas: COMMERCIAL

10% Glass fiber filled, standard flow Polyetherimide (Tg 217C). US FDA and European Food Contact approved. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI).

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	114	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	115	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	6	%	ASTM D 638
Tensile Modulus, 5 mm/min	4680	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	160	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	5500	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	115	MPa	ISO 527
Tensile Stress, break, 5 mm/min	115	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4	%	ISO 527
Tensile Strain, break, 5 mm/min	4	%	ISO 527
Tensile Modulus, 1 mm/min	4500	MPa	ISO 527
Flexural Stress, break, 2 mm/min	185	MPa	ISO 178
Flexural Modulus, 2 mm/min	4500	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	53	J/m	ASTM D 256
Izod Impact, notched, -30°C	53	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	10	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	30	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	223	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	205	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.24E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
CTE, 23°C to 150°C, flow	2.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	6.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
Vicat Softening Temp, Rate B/120	217	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	205	°C	ISO 75/Ae
Relative Temp Index, Elec	170	°C	UL 746B
Relative Temp Index, Mech w/impact	170	°C	UL 746B
Relative Temp Index, Mech w/o impact	170	°C	UL 746B
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.34	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.6	%	SABIC Method
Melt Flow Rate, 200°C/3.8 kgf	5	g/10 min	ASTM D 1238

Density	1.34	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.6	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	9	cm ³ /10 min	ISO 1133

Source GMD, last updated:06/21/2007

Processing

Parameter	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	350 - 405	°C
Front - Zone 3 Temperature	360 - 415	°C
Middle - Zone 2 Temperature	350 - 405	°C
Rear - Zone 1 Temperature	340 - 395	°C
Hopper Temperature	80 - 120	°C
Mold Temperature	140 - 180	°C

Source GMD, last updated:06/21/2007

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(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°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.

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