SABIC Innovative Plastics™

Ultem* Resin 2200F

Americas: COMMERCIAL

20% Glass fiber filled, standard flow Polyetherimide (Tg 217C). ECO Conforming. US FDA Food Contact compliant in recognized colors.

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	131	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	131	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	4	%	ASTM D 638
Tensile Modulus, 5 mm/min	6890	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	225	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	6850	MPa	ASTM D 790
Hardness, Rockwell M	114	-	ASTM D 785
Tensile Stress, yield, 5 mm/min	131	MPa	ISO 527
Tensile Stress, break, 5 mm/min	131	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	6890	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	228	MPa	ISO 178
Flexural Modulus, 2 mm/min	6890	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, unnotched, 23°C	480	J/m	ASTM D 4812
Izod Impact, notched, 23°C	64	J/m	ASTM D 256
Izod Impact, notched, -30°C	70	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	464	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	8	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	64	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	70	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	65	kJ/m²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	220	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	208	°C	ASTM D 648
CTE, -40°C to 150°C, xflow	5.E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, flow	2.5E-05	1/°C	ASTM E 831
CTE, 23°C to 150°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	5.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
Vicat Softening Temp, Rate B/120	218	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	205	°C	ISO 75/Ae
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.42	-	ASTM D 792
Water Absorption, 24 hours	0.19	%	ASTM D 570
Water Absorption, equilibrium, 23C	1.1	%	ASTM D 570

Mold Shrinkage, flow, 3.2 mm	0.3 - 0.5	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	0.3 - 0.5	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	6	g/10 min	ASTM D 1238
Density	1.42	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.55	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	7	cm³/10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Volume Resistivity	7.E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in oil, 1.6 mm	26.3	kV/mm	ASTM D 149
Relative Permittivity, 1 kHz	3.5	-	ASTM D 150
Dissipation Factor, 1 kHz	0.0015	-	ASTM D 150
Dissipation Factor, 2450 MHz	0.0049	-	ASTM D 150
FLAME CHARACTERISTICS	Value	Unit	Standard
Oxygen Index (LOI)	50	%	ASTM D 2863

Source GMD, last updated:08/05/2004

Processing

Parameter Injection Molding	Value	Unit
Drying Temperature	150	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	24	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	350 - 400	°C
Nozzle Temperature	345 - 400	°C
Front - Zone 3 Temperature	345 - 400	°C
Middle - Zone 2 Temperature	340 - 400	°C
Rear - Zone 1 Temperature	330 - 400	°C
Mold Temperature	135 - 165	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm

Source GMD, last updated:08/05/2004

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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