



ULTEM™ Resin 2300F
Americas: COMMERCIAL

30% Glass fiber filled, standard flow Polyetherimide (Tg 217C). ECO Conforming. US FDA Food Contact compliant in recognized colors.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1720	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	1610	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Modulus, 5 mm/min	94900	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	2290	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	91200	kgf/cm ²	ASTM D 790
Hardness, Rockwell M	114	-	ASTM D 785
Tensile Stress, yield, 5 mm/min	165	MPa	ISO 527
Tensile Stress, break, 5 mm/min	165	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	9500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	225	MPa	ISO 178
Flexural Modulus, 2 mm/min	8500	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	43	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	8	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	9	cm-kgf/cm	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	50	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	101	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	40	kJ/m ²	ISO 180/1A

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(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.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:
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IMPACT			
Izod Impact, notched 80*10*4 -30°C	40	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	227	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	208	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	212	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	210	°C	ASTM D 648
CTE, -40°C to 150°C, xflow	6.E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, flow	2.E-05	1/°C	ASTM E 831
CTE, 23°C to 150°C, flow	2.E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	6.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	213	°C	ISO 306
Vicat Softening Temp, Rate B/120	220	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	210	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.51	-	ASTM D 792
Water Absorption, 24 hours	0.16	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.9	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.2 - 0.4	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.2 - 0.4	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	5	g/10 min	ASTM D 1238
Density	1.51	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.9	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.5	%	ISO 62

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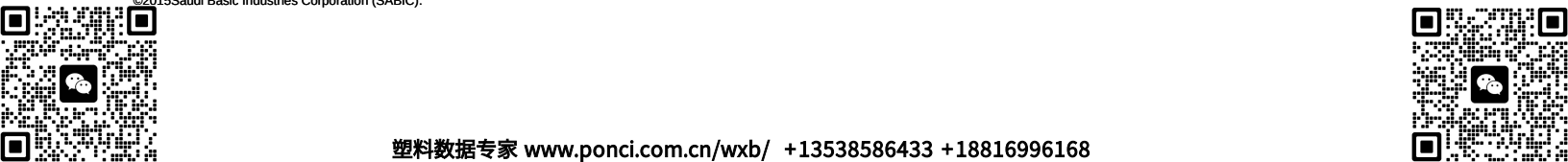
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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Melt Volume Rate, MVR at 360°C/5.0 kg	6	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	3.E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 1.6 mm	24.8	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	30.3	kV/mm	ASTM D 149
Relative Permittivity, 1 kHz	3.7	-	ASTM D 150
Dissipation Factor, 1 kHz	0.0015	-	ASTM D 150
Dissipation Factor, 2450 MHz	0.0053	-	ASTM D 150
FLAME CHARACTERISTICS			
Oxygen Index (LOI)	50	%	ASTM D 2863

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
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

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