

ULTEM™ RESIN 2310F

REGION EUROPE

DESCRIPTION

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

TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	20	mg/1000cy	SABIC method
Tensile Stress, break, 5 mm/min	165	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	9500	MPa	ISO 527
Flexural Stress, break, 2 mm/min	225	MPa	ISO 178
Flexural Modulus, 2 mm/min	8500	MPa	ISO 178
Hardness, H358/30	165	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	40	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	40	kJ/m ²	ISO 180/1U
Charpy Impact, notched, 23°C	10	kJ/m ²	ISO 179/2C
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	40	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	40	kJ/m ²	ISO 179/1eU
THERMAL			
Thermal Conductivity	0.33	W/m·°C	ISO 8302
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 A/50	225	°C	ISO 306
Vicat Softening Temp, Rate B/50	213	°C	ISO 306
Vicat Softening Temp, Rate B/120	220	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	215	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	210	°C	ISO 75/Ae
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow	0.2 – 0.4	%	SABIC method
Density	1.51	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.9	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.5	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	8	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	26	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	15	kV/mm	IEC 60243-1

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Relative Permittivity, 1 MHz	3.4	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0016	-	IEC 60250
Dissipation Factor, 1 MHz	0.0023	-	IEC 60250
Dissipation Factor, 2450 MHz	0.0053	-	IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Comparative Tracking Index, M	100	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.3	-	IEC 60250
FLAME CHARACTERISTICS			
Glow Wire Flammability Index 960°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	48	%	ISO 4589
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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