

# ULTEM™ RESIN 9076

## DESCRIPTION

Standard flow Polyetherimide Blend. Meets FAR 25.853 and OSU 65/65 with low toxicity, smoke, and flame evolution. ECO Conforming.

### GENERAL INFORMATION

Features	No PFAS intentionally added
Processing Techniques	Injection Molding, Profile Extrusion

## TYPICAL PROPERTY VALUES

Revision 20241105

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yield, 50 mm/min	95	MPa	ISO 527
Tensile Stress, break, 50 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	3000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	135	MPa	ISO 178
Flexural Modulus, 2 mm/min	3000	MPa	ISO 178
Ball Indentation Hardness, H358/30	145	MPa	ISO 2039-1
<b>IMPACT</b>			
Izod Impact, notched 80*10*4 +23°C	6	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Thermal Conductivity	0.26	W/m·°C	ISO 8302
CTE, 23°C to 150°C, flow	5.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	5.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	210	°C	ISO 306
Vicat Softening Temp, Rate B/50	200	°C	ISO 306
Vicat Softening Temp, Rate B/120	200	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	195	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	175	°C	ISO 75/Ae
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow	0.6 – 0.8	%	SABIC method
Density	1.3	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	1.25	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.7	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	22	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 3.2 mm	18	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.8	-	IEC 60250
Dissipation Factor, 1 MHz	0.005	-	IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250
<b>FLAME CHARACTERISTICS</b>			
Glow Wire Flammability Index 960°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	50	%	ISO 4589
<b>INJECTION MOLDING</b>			
Drying Temperature	160	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	360 – 380	°C	
Nozzle Temperature	360 – 380	°C	
Front - Zone 3 Temperature	360 – 380	°C	
Middle - Zone 2 Temperature	345 – 365	°C	
Rear - Zone 1 Temperature	320 – 340	°C	
Hopper Temperature	80 – 120	°C	
Mold Temperature	140 – 160	°C	
<b>PROFILE EXTRUSION</b>			
Drying Temperature	130 – 140	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 340	°C	
Barrel - Zone 1 Temperature	290 – 310	°C	
Barrel - Zone 2 Temperature	305 – 330	°C	
Barrel - Zone 3 Temperature	315 – 340	°C	
Barrel - Zone 4 Temperature	320 – 345	°C	
Hopper Temperature	80 – 100	°C	
Adapter Temperature	295 – 345	°C	
Die Temperature	285 – 340	°C	
Calibrator Temperature	140 – 170	°C	
Calibrator 2 Temperature	90 – 130	°C	

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