



ULTEM™ Resin 9085
Americas: COMMERCIAL

High flow Polyetherimide blend. Meets FAR 25.853 and OSU 65/65 with low toxicity, smoke and flame evolution.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	850	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	750	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	72	%	ASTM D 638
Tensile Modulus, 5 mm/min	35000	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1400	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	29700	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	88	MPa	ISO 527
Tensile Stress, break, 5 mm/min	71	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	6.7	%	ISO 527
Tensile Strain, break, 5 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	3050	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2750	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	11	cm-kgf/cm	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	13	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	153	°C	ASTM D 648
Vicat Softening Temp, Rate B/120	173	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	152	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.34	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method





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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Melt Flow Rate, 295°C/6.6 kgf	8.9	g/10 min	ASTM D 1238
Density	1.34	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.39	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.17	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	65	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
FAA Flammability, FAR 25.853 A/B	<5	-	FAR 25.853
OSU total heat release (2 minute test)	16	kW-min/m ²	FAR 25.853
OSU peak heat release rate (5 minute test)	36	kW/m ²	FAR 25.853
Vertical Burn a (60s) passes at	2	sec	FAR 25.853
Oxygen Index (LOI)	49	%	ASTM D 2863



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	135	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	330 - 350	°C
Nozzle Temperature	330 - 350	°C
Front - Zone 3 Temperature	330 - 350	°C
Middle - Zone 2 Temperature	325 - 345	°C
Rear - Zone 1 Temperature	315 - 340	°C
Mold Temperature	120 - 150	°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
Profile Extrusion		
Drying Temperature	120 - 130	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	280 - 310	°C
Barrel - Zone 1 Temperature	265 - 275	°C
Barrel - Zone 2 Temperature	280 - 295	°C
Barrel - Zone 3 Temperature	290 - 305	°C
Barrel - Zone 4 Temperature	295 - 310	°C
Hopper Temperature	80 - 100	°C
Adapter Temperature	270 - 310	°C
Die Temperature	260 - 310	°C
Calibrator Temperature	130 - 160	°C

