ULTEM™ RESIN 9085

REGION ASIA

DESCRIPTION

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

INDUSTRY	SUB INDUSTRY
Industrial	Defense, Additive Manufacturing, Additive Materials
Mass Transportation	Rail, Aircraft Interiors

TYPICAL PROPERTY VALUES

Revision 20181127

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	84	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	74	MPa	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	3440	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	138	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2920	MPa	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	115	J/m	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	13	kJ/m²	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	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 295°C/6.6 kgf	8.9	g/10 min	ASTM D 1238
Density	1.34	g/cm³	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 340°C/5.0 kg	40	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			

© 2018 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
FAA Flammability, FAR 25.853 A/B	<5	-	FAR 25.853
OSU total heat release (2 minute test)	16	kW-min/m²	FAR 25.853
OSU peak heat release rate (5 minute test)	36	kW/m²	FAR 25.853
Vertical Burn a (60s) passes at	2	sec	FAR 25.853
Oxygen Index (LOI)	49	%	ASTM D 2863
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	
Calibrator 2 Temperature	80 – 120	°C	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2018 Copyright by SABIC. All rights reserved