ULTEM™ RESIN MD256T

DESCRIPTION

Transparent polyetherimide (PEI) based master batch containing PET resin. It can be mixed with PET resin for extrusion, injection etc., and is easy to disperse with good compatibility. Tg is 129°C and it can improve the heat resistance, mechanical strength and modules of PET resin

GENERAL INFORMATION	
Features	Chemical Resistance, Good Processability, Low Shrinkage, Creep resistant, Dimensional stability, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Film Extrusion, Injection Molding

INDUSTRY	SUB INDUSTRY
Industrial	Electrical, Industrial General
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20250113

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 50 mm/min	90	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	3.5	%	ASTM D638
Tensile Modulus, 5 mm/min	3224	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	143	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3020	MPa	ASTM D790
Tensile Stress, break, 50 mm/min	93	MPa	ISO 527
Tensile Strain, break, 50 mm/min	4.2	%	ISO 527
Tensile Modulus, 1 mm/min	3056	MPa	ISO 527
Flexural Strength, 2 mm/min	145	MPa	ISO 178
Flexural Modulus, 2 mm/min	3072	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	30	J/m	ASTM D256
Izod Impact, unnotched, 23°C	700	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	3.5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	73.6	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	3.2	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	77.3	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	117	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	110	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	122	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	112	°C	ISO 75/Af

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 150°C, flow	65	1/°C	ASTM E831
CTE, -40°C to 150°C, xflow	68	1/°C	ASTM E831
CTE, -40°C to 150°C, flow	65	1/°C	ISO 11359-2
CTE, -40°C to 150°C, xflow	68	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	129	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	130	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	129	°C	ISO 306
Vicat Softening Temp, Rate B/120	131	°C	ISO 306
PHYSICAL (1)			
Specific Gravity	1.31	-	ASTM D792
Density	1.31	g/cm³	ISO 1183
Melt Flow Rate			
290°C/2.16 kgf	37	g/10 min	ASTM D1238
280°C/2.16 kgf	27	g/10 min	ASTM D1238
Melt Volume Rate			
290°C/2.16 kgf	25	cm³/10 min	ISO 1133
280°C/2.16 kgf	18	cm³/10 min	ISO 1133
Water Absorption, (23°C/24hrs)	0.13	%	ASTM D570
Moisture Absorption, (23°C/50% RH/24hrs)	0.04	%	ISO 62-4
Mold Shrinkage, flow (2)	0.69	%	SABIC method
Mold Shrinkage, xflow (2)	0.77	%	SABIC method
INJECTION MOLDING (3)			
Drying Temperature	135 – 150	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	270 – 300	°C	
Nozzle Temperature	270 – 300	°C	
Front - Zone 3 Temperature	270 – 300	°C	
Middle - Zone 2 Temperature	270 – 300	°C	
Rear - Zone 1 Temperature	270 – 300	°C	
Mold Temperature	100 – 150	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	30 – 70	rpm	
Shot to Cylinder Size	30 – 60	%	
Vent Depth	0.025 – 0.076	mm	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 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.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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