ULTEM™ RESIN PW2210

REGION EUROPE

DESCRIPTION

ULTEM PW2210 resin is an imporved flow 20% glass fiber reinforced amorphous polyetherimide (PEI) resin that is offering a high glass transition temperature (Tg) of 217°C. The material has global food contact compliance (FDA, CN, EC), potable water certifications: NSF 61, KTW-BWGL, EN16421. REG4, ACS, WRAS re-certifications are in progress. Features are excellent mechanical, and dimension properties up to high temperatures also under wet conditions. The material offers very good hydrolytic and chemical resistance for an amorphous material. The material is RoHS compliant. Certified colors are natural (transparent amber) and black.

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Taber Abrasion, CS-17, 1 kg	17	mg/1000cy	SABIC method
Tensile Stress, break, 5 mm/min	140	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	6800	MPa	ISO 527
Flexural Stress, break, 2 mm/min	210	MPa	ISO 178
Flexural Modulus, 2 mm/min	6500	MPa	ISO 178
Ball Indentation Hardness, H358/30	150	MPa	ISO 2039-1
IMPACT [1]			
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	30	kJ/m²	ISO 180/1U
Charpy Impact, notched, 23°C	9	kJ/m²	ISO 179/2C
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	35	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	35	kJ/m²	ISO 179/1eU
THERMAL [1]			
Thermal Conductivity	0.28	W/m-°C	ISO 8302
CTE, 23°C to 150°C, flow	2.1E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	4.9E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	223	°C	ISO 306
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
Vicat Softening Temp, Rate B/120	218	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	210	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	205	°C	ISO 75/Ae
PHYSICAL [1]			
Mold Shrinkage on Tensile Bar, flow [2]	0.3 – 0.5	%	SABIC method
Density	1.42	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	1	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.55	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	10	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
Oxygen Index (LOI)	46	%	ISO 4589
INJECTION MOLDING [3]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	

(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.

DISCLAIMER