

ULTEM™ PW1000 resin

Polyether Imide
SABIC Innovative Plastics Europe

Message:
Unfilled Standard flow Polyetherimide (Tg 217°C). Specific grade-colors are designed and certified for use in Potable Water applications. KTW, WRAS, ACS, NSF-61 and W270 certified. US FDA and European Food Contact approved.

General Information			
Features	Food Contact Acceptable		
Uses	Potable Water Applications		
Agency Ratings	ACS Unspecified Rating		
	DVGW W270		
	EU Food Contact, Unspecified Rating		
	FDA Food Contact, Unspecified Rating		
	KTW Unspecified Rating		
	NSF 61		
	WRAS Unspecified Rating		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.27	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	13.0	cm³/10min	ISO 1133
Molding Shrinkage - Flow ¹	0.50 to 0.70	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	1.3	%	
Equilibrium, 23°C, 50% RH	0.70	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	140	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3200	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	105	MPa	
Break	85.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	6.0	%	
Break	60	%	
Flexural Modulus ²	3300	MPa	ISO 178
Flexural Stress	160	MPa	ISO 178

Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	Internal Method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C ³	4.0	kJ/m ²	ISO 179/1eA
23°C ⁴	4.0	kJ/m ²	ISO 179/1eA
23°C	10	kJ/m ²	ISO 179/2C
Notched Izod Impact Strength ⁵			ISO 180/1A
-30°C	6.0	kJ/m ²	
23°C	6.0	kJ/m ²	
Unnotched Izod Impact Strength ⁶			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁷			
0.45 MPa, Unannealed, 100 mm Span	200	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span	190	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	215	°C	ISO 306/A50, ISO 306/B120
--	211	°C	ISO 306/B50
CLTE			ISO 11359-2
Flow : 23 to 150°C	5.0E-5	cm/cm/°C	
Transverse : 23 to 150°C	5.0E-5	cm/cm/°C	
Thermal Conductivity	0.24	W/m/K	ISO 8302
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	47	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	80.0 to 120	°C	
Rear Temperature	340 to 395	°C	
Middle Temperature	350 to 405	°C	
Front Temperature	360 to 415	°C	
Nozzle Temperature	350 to 405	°C	
Processing (Melt) Temp	370 to 410	°C	
Mold Temperature	140 to 180	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*4 sp=62mm		
4.	80*10*4 sp=62mm		

5.	80*10*4
6.	80*10*4
7.	120*10*4 mm

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