

# ULTEM™ RESIN PW2400

REGION EUROPE

## DESCRIPTION

40% Glass fiber filled, standard flow Polyetherimide (Tg 217C). 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.

INDUSTRY	SUB INDUSTRY
Automotive	Aerospace
Building and Construction	Water Management
Consumer	Home Appliances, Commercial Appliance
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, General Healthcare
Industrial	Material Handling
Mass Transportation	Rail

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Taber Abrasion, CS-17, 1 kg	20	mg/1000cy	SABIC method
Tensile Stress, break, 5 mm/min	180	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	11500	MPa	ISO 527
Flexural Stress, break, 2 mm/min	240	MPa	ISO 178
Flexural Modulus, 2 mm/min	10000	MPa	ISO 178
Ball Indentation Hardness, H358/30	170	MPa	ISO 2039-1
<b>IMPACT</b>			
Izod Impact, unnotched 80*10*4 +23°C	35	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	35	kJ/m <sup>2</sup>	ISO 180/1U
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	40	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	40	kJ/m <sup>2</sup>	ISO 179/1eU
<b>THERMAL</b>			
Thermal Conductivity	0.33	W/m·°C	ISO 8302
CTE, 23°C to 150°C, flow	1.4E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	4.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	230	°C	ISO 306
Vicat Softening Temp, Rate B/50	217	°C	ISO 306
Vicat Softening Temp, Rate B/120	225	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	215	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	210	°C	ISO 75/Ae
Relative Temp Index, Elec <sup>(1)</sup>	170	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(1)</sup>	170	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(1)</sup>	170	°C	UL 746B

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow	0.1 – 0.3	%	SABIC method
Density	1.61	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.8	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.4	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	5	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
Comparative Tracking Index (UL) {PLC}	5	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
<b>FLAME CHARACTERISTICS <sup>(1)</sup></b>			
UL Yellow Card Link	<a href="#">E121562-221103</a>	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.25	mm	UL 94
Glow Wire Ignitability Temperature, 1.5 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	850	°C	IEC 60695-2-13
Glow Wire Flammability Index, 1.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12
Oxygen Index (LOI)	48	%	ISO 4589
<b>INJECTION MOLDING</b>			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	370 – 410	°C	
Nozzle Temperature	370 – 410	°C	
Front - Zone 3 Temperature	380 – 420	°C	
Middle - Zone 2 Temperature	370 – 410	°C	
Rear - Zone 1 Temperature	350 – 390	°C	
Hopper Temperature	80 – 100	°C	
Mold Temperature	140 – 180	°C	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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