

# ULTEM™ RESIN CRS5201R

REGION EUROPE

## DESCRIPTION

20% Glass fiber filled, standard flow Polyetherimide copolymer (Tg 225C) with internal mold release and enhanced chemical resistance to strong acids, bases, aromatics, and ketones. ECO Conforming.

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Automotive Under the Hood, Aerospace, Motorcycle, Recreational/Specialty Vehicles
Building and Construction	Building Component
Consumer	Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Energy Management, Drone Solutions, Mobile Phone - Computer - Tablets, Circuit Boards/Additives, Printer Copier, Speaker - Earphone
Industrial	Electrical, Material Handling
Mass Transportation	Rail
Packaging	Industrial Packaging

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, break, 5 mm/min	135	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Tensile Modulus, 1 mm/min	7200	MPa	ISO 527
Flexural Stress, break, 2 mm/min	180	MPa	ISO 178
Flexural Modulus, 2 mm/min	5800	MPa	ISO 178
Ball Indentation Hardness, H358/30	145	MPa	ISO 2039-1
<b>IMPACT</b>			
Izod Impact, unnotched 80*10*4 +23°C	40	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	40	kJ/m <sup>2</sup>	ISO 180/1U
<b>THERMAL</b>			
CTE, -40°C to 150°C, flow	2.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 150°C, xflow	5.8E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	225	°C	ISO 306
Vicat Softening Temp, Rate B/50	220	°C	ISO 306
Vicat Softening Temp, Rate B/120	222	°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
Relative Temp Index, Elec <sup>(1)</sup>	105	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(1)</sup>	105	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(1)</sup>	105	°C	UL 746B
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow	0.3 – 0.5	%	SABIC method
Density	1.43	g/cm <sup>3</sup>	ISO 1183

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Water Absorption, (23°C/saturated)	1	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	5	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
Volume Resistivity	1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 1.6 mm	26	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0016	-	IEC 60250
Dissipation Factor, 1 MHz	0.0043	-	IEC 60250
Comparative Tracking Index <sup>(2)</sup>	150	V	IEC 60112
Comparative Tracking Index, M <sup>(2)</sup>	100	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.2	-	IEC 60250
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥3	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="#">E121562-103873032</a>	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at <sup>(2)</sup>	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	47	%	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.

(2) Value shown here is based on internal measurement.

## 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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