

CYCOLOYTM FR RESINS C6200

REGION AMERICAS

DESCRIPTION

Non-chlorinated, nombrominated flame retardant PC/ABS offering balanced heat, flow and impact to meet various application needs.

TYPICAL PROPERTY VALUES

Revision 20200501

MECHANICAL TYPICAL VALUES UNITS TEST METHODS MECHANICAL Tensile Stress, yld, Type I, 50 mm/min 66 MPa ASTM D638 Tensile Strain, brk, Type I, 50 mm/min 50 % ASTM D638 Flexural Stress, yld, 2.6 mm/min, 100 mm span 103 MPa ASTM D790 IEVAL ASTM D636 MPa ASTM D790 IEVED IMPACT Izod Impact, notched, 23°C 534 1/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 THERMAL HDT, 1.82 MPa, 3.2 mm, unannealed 87 °C ASTM D648 HDT, 1.82 MPa, 6.4 mm, unannealed 90 °C ASTM D648 HDT, 1.82 MPa, 6.4 mm, unannealed 90 °C ASTM D648 Relative Temp Index, Mech w/n impact 85 °C UL 7468 Relative Temp Index, Mech w/n impact 85 °C UL 7468 PHYSICAL <th colspan<="" th=""><th></th><th></th><th></th><th></th></th>	<th></th> <th></th> <th></th> <th></th>				
Tensile Stress, yld, Type I, 50 mm/min 66 MPa ASTM D638 Tensile Strain, brk, Type I, 50 mm/min 50 % ASTM D638 Flexural Stress, yld, 2.6 mm/min, 100 mm span 103 MPa ASTM D790 IExural Modulus, 2.6 mm/min, 100 mm span 2680 MPa ASTM D790 IMPACT Izvo dimpact, notched, 23°C 534 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 85 °C ASTM D648 HDT, 1.82 MPa, 2.4 MPa, 2	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS	
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Flexural Stress, yld, 2.6 mm/min, 100 mm span 2680	Tensile Stress, yld, Type I, 50 mm/min	66	MPa	ASTM D638	
Flexural Modulus, 2.6 mm/min, 100 mm span 2680	Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D638	
IMPACT Izod Impact, notched, 23°C 534 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, -30°C 54 J ASTM D3763 THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 87 °C ASTM D648 HDT, 1.82 MPa, 6.4 mm, unannealed 90 °C ASTM D648 Relative Temp Index, Elec 85 °C UL 746B Relative Temp Index, Mech w/o impact 85 °C UL 746B PHYSICAL Specific Gravity 1.18 - ASTM D792 Mold Shrinkage, flow, 3.2 mm 0.4 - 0.6 % SABIC method Mold Shrinkage, xflow, 3.2 mm 0.4 - 0.6 % SABIC method Melt Flow Rate, 260°C/2.16 kgf 14.5 g/10 min ASTM D1238 Spiral Flow, 260°C, 10 ips, 3.175 X 1524 mm 685.8 mm - ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition (PLC) 2	Flexural Stress, yld, 2.6 mm/min, 100 mm span	103	MPa	ASTM D790	
Izod Impact, notched, 23°C 534 1/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, -30°C 54 J ASTM D3763 Instrumented Dart Impact Energy @ peak, -30°C 54 J ASTM D3763 THERMAL	Flexural Modulus, 2.6 mm/min, 100 mm span	2680	MPa	ASTM D790	
Instrumented Dart Impact Energy @ peak, 23°C 61 J ASTM D3763 Instrumented Dart Impact Energy @ peak, -30°C 54 J ASTM D3763 THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 87 °C ASTM D648 HDT, 1.82 MPa, 6.4 mm, unannealed 90 °C ASTM D648 Relative Temp Index, Elec 85 °C UL 746B Relative Temp Index, Mech w/impact 85 °C UL 746B PHYSICAL Specific Gravity 1.18 - ASTM D792 Mold Shrinkage, flow, 3.2 mm 0.4 - 0.6 % SABIC method Mold Shrinkage, xflow, 3.2 mm 0.4 - 0.6 % SABIC method Melt Flow Rate, 260°C/2.16 kgf 14.5 g/10 min ASTM D1238 Spiral Flow,260°C, 10 ips, 3.175 X 1524 mm 685.8 mm - ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition {PLC} 2 PLC Code <	IMPACT				
Instrumented Dart Impact Energy @ peak, -30°C	Izod Impact, notched, 23°C	534	J/m	ASTM D256	
THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 87 °C ASTM D648 HDT, 1.82 MPa, 6.4 mm, unannealed 90 °C ASTM D648 Relative Temp Index, Elec 85 °C UL 746B Relative Temp Index, Mech w/impact 85 °C UL 746B Relative Temp Index, Mech w/o impact 85 °C UL 746B PHYSICAL S V UL 746B Specific Gravity 1.18 - ASTM D792 Mold Shrinkage, flow, 3.2 mm 0.4 - 0.6 % SABIC method Mold Shrinkage, xflow, 3.2 mm 0.4 - 0.6 % SABIC method Melt Flow Rate, 260°C/2.16 kgf 14.5 g/10 min ASTM D1238 Spiral Flow,260°C,10 ips,3.175 X 1524 mm 685.8 mm - ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition {PLC} 2 PLC Code UL 746A	Instrumented Dart Impact Energy @ peak, 23°C	61	J	ASTM D3763	
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Mold Shrinkage, flow, 3.2 mm 0.4 – 0.6 % SABIC method Mold Shrinkage, xflow, 3.2 mm 0.4 – 0.6 % SABIC method Melt Flow Rate, 260°C/2.16 kgf 14.5 g/10 min ASTM D1238 Spiral Flow,260°C,10 ips,3.175 X 1524 mm 685.8 mm - ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition {PLC) 2 PLC Code UL 746A	PHYSICAL				
Mold Shrinkage, xflow, 3.2 mm 0.4 – 0.6 % SABIC method Melt Flow Rate, 260°C/2.16 kgf 14.5 g/10 min ASTM D1238 Spiral Flow,260°C,10 ips,3.175 X 1524 mm 685.8 mm - ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition {PLC} 2 PLC Code UL 746A	Specific Gravity	1.18	-	ASTM D792	
Melt Flow Rate, 260°C/2.16 kgf 14.5 g/10 min ASTM D1238 Spiral Flow,260°C,10 ips,3.175 X 1524 mm 685.8 mm - ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition {PLC} 2 PLC Code UL 746A	Mold Shrinkage, flow, 3.2 mm	0.4 – 0.6	%	SABIC method	
Spiral Flow,260°C,10 ips,3.175 X 1524 mm 685.8 mm - ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition {PLC) 2 PLC Code UL 746A	Mold Shrinkage, xflow, 3.2 mm	0.4 – 0.6	%	SABIC method	
ELECTRICAL Arc Resistance, Tungsten {PLC} 6 PLC Code ASTM D495 Hot Wire Ignition {PLC} 2 PLC Code UL 746A	Melt Flow Rate, 260°C/2.16 kgf	14.5	g/10 min	ASTM D1238	
Arc Resistance, Tungsten {PLC}6PLC CodeASTM D495Hot Wire Ignition {PLC}2PLC CodeUL 746A	Spiral Flow,260°C,10 ips,3.175 X 1524 mm	685.8	mm	-	
Hot Wire Ignition (PLC) 2 PLC Code UL 746A	ELECTRICAL				
	Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495	
High Voltage Arc Track Rate {PLC} 3 PLC Code UL 746A	Hot Wire Ignition (PLC)	2	PLC Code	UL 746A	
	High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A	
High Ampere Arc Ign, surface {PLC}0PLC CodeUL 746A	High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A	
Comparative Tracking Index (UL) {PLC} 2 PLC Code UL 746A	Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A	
Volume Resistivity >1.E+15 Ω.cm IEC 60093	Volume Resistivity	>1.E+15	$\Omega.cm$	IEC 60093	
Surface Resistivity, ROA $>1.E+15$ Ω IEC 60093	Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093	
Dielectric Strength, in oil, 0.8 mm35kV/mmIEC 60243-1	Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1	
Dielectric Strength, in oil, 1.6 mm 25 kV/mm IEC 60243-1	Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1	
Dielectric Strength, in oil, 3.2 mm 17 kV/mm IEC 60243-1	Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1	
Relative Permittivity, 1 MHz 2.7 - IEC 60250	Relative Permittivity, 1 MHz	2.7	-	IEC 60250	
Dissipation Factor, 50/60 Hz 0.004 - IEC 60250	Dissipation Factor, 50/60 Hz	0.004	-	IEC 60250	
	Dissipation Factor, 1 MHz	0.008	-	IEC 60250	
Dissipation Factor, 1 MHz 0.008 - IEC 60250		2.8		IEC 60250	



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-221037	-	-
UL Recognized, 94HB Flame Class Rating	0.71	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	1.21	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.47	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	3.4	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2	mm	UL 94
INJECTION MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	245 – 275	°C	
Nozzle Temperature	245 – 275	°C	
Front - Zone 3 Temperature	245 – 275	°C	
Middle - Zone 2 Temperature	220 – 275	°C	
Rear - Zone 1 Temperature	220 – 255	°C	
Mold Temperature	60 – 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	30 – 80	%	
Vent Depth	0.038 - 0.076	mm	

DISCLAIMER

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