

CYCOLOY™ FR RESINS C6600

REGION EUROPE

DESCRIPTION

CYCOLOY C6600 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an injection moldable non chlorinated/brominated flame retardant grade with balanced flow, impact and hydrolytic stability. It also offers good chemical resistance and colorability in opaque colors. It has a UL94 V0@1.5mm and 5VB@2.0mm flame rating.

TYPICAL PROPERTY VALUES

Revision 20210706

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	>50	%	ISO 527
Tensile Modulus, 1 mm/min	2700	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2700	MPa	ISO 178
Ball Indentation Hardness, H358/30	110	MPa	ISO 2039-1
Hardness, Rockwell R	122	-	ISO 2039-2
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	15	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Thermal Conductivity	0.2	W/m·°C	ISO 8302
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	95	°C	ISO 306
Vicat Softening Temp, Rate B/120	107	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	90	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	80	°C	ISO 75/Ae
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	70	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow	0.4 – 0.6	%	SABIC method

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.19	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.6	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	16	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	48	cm ³ /10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
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, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.004	-	IEC 60250
Dissipation Factor, 1 MHz	0.006	-	IEC 60250
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45329-236722	-	-
UL Recognized, 94V-2 Flame Class Rating	0.75	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1.0	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	775	°C	IEC 60695-2-13
Oxygen Index (LOI)	32	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	2 – 4	Hrs	
Melt Temperature	250 – 270	°C	
Nozzle Temperature	250 – 270	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Middle - Zone 2 Temperature	240 – 260	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	70 – 85	°C	

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