

# CYCOLOY™ FR RESINS C6600

REGION AMERICAS

## 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
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	63	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	49	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	80	%	ASTM D638
Tensile Modulus, 50 mm/min	3000	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	94	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2620	MPa	ASTM D790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	550	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	51	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	51	J	ASTM D3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	99	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	83	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	98	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	90	°C	ASTM D648
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
<b>PHYSICAL</b>			
Specific Gravity	1.19	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.11	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.6	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	21.5	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 260°C/5.0 kg	48	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, 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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>FLAME CHARACTERISTICS</b>			
UL Yellow Card Link	E121562-221038	-	-
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
<b>INJECTION MOLDING</b>			
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

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.