CYCOLOY™ FR RESIN C2805

DESCRIPTION

CYCOLOY C2805 compound is based on Polycarbonate / Acrylonitrile Butadiene Styrene (PC/ABS) blend containing 5% PTFE. Added features of this grade include: Wear Resistant and Flame Retardant targeted for moving components in business equipment. Medium heat performance.

GENERAL INFORMATION	
Features	Flame Retardant, Wear resistant, Non Cl/Br flame retardant, Non halogenated flame retardant
Fillers	Unreinforced, PTFE
Polymer Types	Polycarbonate + ABS (PC+ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Building and Construction	Building Component
Consumer	Sport/Leisure
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	110	%	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	95	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2720	MPa	ASTM D790
K-factor xE-10, PV=2000 psi-fpm vs Steel	430	-	SABIC method
Coefficient of Friction on steel, Static	0.16	-	ASTM D1894
Coefficient of Friction on steel,Kinetic	0.21	-	ASTM D1894
IMPACT [1]			
Izod Impact, notched, 23°C	133	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	82	°C	ASTM D648
Relative Temp Index, Elec [2]	60	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	60	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	60	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.22	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [3]	0.4 – 0.5	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [3]	0.3 – 0.5	%	SABIC method
ELECTRICAL [2]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-100900880	-	-
UL Recognized, 94-5VB Flame Class Rating	≥2.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	75 – 80	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	230 – 275	°C	
Nozzle Temperature	230 – 275	°C	
Front - Zone 3 Temperature	225 – 275	°C	
Middle - Zone 2 Temperature	215 – 260	°C	
Rear - Zone 1 Temperature	210 – 255	°C	
Mold Temperature	50 – 70	°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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 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.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

DISCLAIMER