CYCOLOY™ FR RESINS CM6240

REGION ASIA

DESCRIPTION

CYCOLOY CM6240 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an injection moldable non chlorinated/brominated mineral-filled flame retardant grade. It features high modulus, good flow, ductility and low warpage. It has a UL94 V0@0.8mm and 5VB@1.5mm flame rating and is a good candidate for thin wall applications.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	55	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	40	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	35	%	ASTM D 638
Tensile Modulus, 5 mm/min	4350	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	96	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	4400	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	56	MPa	ISO 527
Tensile Stress, break, 5 mm/min	29	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Tensile Strain, break, 5 mm/min	25	%	ISO 527
Tensile Modulus, 1 mm/min	4460	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	101	MPa	ISO 178
Flexural Modulus, 2 mm/min	4510	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	86	J/m	ASTM D 256
Izod Impact, notched, -30°C	60	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	56	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	35	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	97	°C	ASTM D 1525
HDT, 1.82 MPa, 6.4 mm, unannealed	90	°C	ASTM D 648
CTE, -40°C to 40°C, flow	4.9E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.4E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	4.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.3E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	97	°C	ISO 306
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	86	°C	ISO 75/Af
PHYSICAL			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.3	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.3 – 0.4	%	SABIC method
Mold Shrinkage, flow	0.33	%	SABIC method
Mold Shrinkage, xflow	0.38	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	16.5	g/10 min	ASTM D 1238
Density	1.3	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	15	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Compliant, 94V-0 Flame Class Rating	0.8	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VB Rating	1.5	mm	UL 94 by SABIC-IP
INJECTION MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	>4 - 6	hrs	
Drying Time (Cumulative)	16	hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	255 – 285	°C	
Nozzle Temperature	255 – 285	°C	
Front - Zone 3 Temperature	255 – 285	°C	
Middle - Zone 2 Temperature	230 – 275	°C	
Rear - Zone 1 Temperature	220 – 255	°C	
Mold Temperature	70 – 95	°C	

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