

# CYCOLOY™ FR RESIN BM5225Y

REGION ASIA

## DESCRIPTION

CYCOLOY BM5225Y 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@1.5mm and 5VB@1.5mm flame rating and is a good candidate for thin wall applications.

## TYPICAL PROPERTY VALUES

Revision 20181012

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	55	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	34	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.8	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	5	%	ASTM D 638
Tensile Modulus, 5 mm/min	5850	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	98	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	6010	MPa	ASTM D 790
Hardness, Rockwell R	109	-	ASTM D 785
Tensile Stress, yield, 5 mm/min	56	MPa	ISO 527
Tensile Stress, break, 5 mm/min	30	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.8	%	ISO 527
Tensile Strain, break, 5 mm/min	5	%	ISO 527
Tensile Modulus, 1 mm/min	5570	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	98	MPa	ISO 178
Flexural Modulus, 2 mm/min	6150	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	50	J/m	ASTM D 256
Izod Impact, notched, -30°C	37	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	20	J	ASTM D 3763
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	98	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	93	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	85	°C	ASTM D 648
CTE, 23°C to 80°C, flow	3.4E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	6.9E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	87	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.39	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.3	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	12	g/10 min	ASTM D 1238
Density	1.4	g/cm <sup>3</sup>	ISO 1183
<b>FLAME CHARACTERISTICS</b>			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Recognized, 94V-1 Flame Class Rating	0.8	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VB Rating	1.5	mm	UL 94
<b>INJECTION MOLDING</b>			
Drying Temperature	90 – 105	°C	
Drying Time	4 – 6	hrs	
Drying Time (Cumulative)	16	hrs	
Melt Temperature	270 – 300	°C	
Nozzle Temperature	280 – 300	°C	
Front - Zone 3 Temperature	270 – 290	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	250 – 270	°C	
Mold Temperature	70 – 90	°C	

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