



CYCOLAC™ RESIN FR23

REGION AMERICAS

DESCRIPTION

Flame retardant ABS (non-PBBE additives). Good properties/toughness. Excellent moldability. UL94 V-0 rated.

TYPICAL PROPERTY VALUES

Revision 20170816

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	42	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	35	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	11	%	ASTM D 638
Tensile Modulus, 5 mm/min	2410	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	73	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2720	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	267	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	41	J	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	90	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	83	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	72	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.92E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.92E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
PHYSICAL			
Specific Gravity	1.17	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 230°C/3.8 kgf	6.8	g/10 min	ASTM D 1238
Melt Viscosity, 200°C, 1000 sec-1	3100	Poise	ASTM D 3825
Melt Flow Rate, 220°C/5.0 kg	9	g/10 min	ISO 1133
Melt Volume Rate, MVR at 220°C/10.0 kg	37	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Recognized, 94V-0 Flame Class Rating (3)	2.31	mm	UL 94
UL Recognized, 94-5VB Rating (3)	2.48	mm	UL 94
INJECTION MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	2 – 4	hrs	
Drying Time (Cumulative)	6	hrs	
Maximum Moisture Content	0.1	%	
Melt Temperature	200 – 220	°C	
Nozzle Temperature	200 – 220	°C	
Front - Zone 3 Temperature	200 – 215	°C	
Middle - Zone 2 Temperature	195 – 205	°C	
Rear - Zone 1 Temperature	170 – 180	°C	
Mold Temperature	50 – 70	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	30 – 60	rpm	
Shot to Cylinder Size	50 – 70	%	
Vent Depth	0.038 – 0.051	mm	

DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

SABIC as referred to herein means any legal entity belonging to the group of companies headed by Saudi Arabia Basic Industries Corporation.