CYCOLAC™ FR15 resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

Flame retardant ABS (non-PBBE additive). Good property/toughness. Excellent moldability. UL94 V-0/5VA rated.

General Information			
Additive	Flame retardancy		
Features	Good formability Good toughness Flame retardancy		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.20	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)			
230°C/3.8 kg	4.0	g/10 min	ASTM D1238
220°C/5.0 kg	10	g/10 min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [1]	2340	MPa	ASTM D638
Tensile Strength [2]			ASTM D638
Yield	41.4	MPa	ASTM D638
Fracture	35.2	MPa	ASTM D638
Tensile Elongation [3]			ASTM D638
Yield	2.3	%	ASTM D638
Fracture	9.0	%	ASTM D638
Flexural Modulus [4] (50.0 mm Span)	2720	MPa	ASTM D790
Flexural Strength [5] (Yield, 50.0 mm Span)	71.7	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	210	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	33.9	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 3.20mm	82.2	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	70.0	°C	ASTM D648
Vicat Softening Temperature	86.1	°C	ASTM D1525 [6]
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 40°C	8.5E-5	cm/cm/°C	ASTM E831

Lateral: -40 to 40°C	8.6E-5	cm/cm/°C	ASTM E831
RTI Elec	60.0	°C	UL 746
RTI Imp	60.0	°C	UL 746
RTI	60.0	°C	UL 746
Electrical	**Nominal Value**		**Test Method**
Arc Resistance [7]	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 4		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	**Nominal Value**		**Test Method**
Flame Rating			UL 94
1.50 mm	V-0		UL 94
2.49 mm	5VA		UL 94
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Viscosity (200°C, 1000 sec^-1)	290	Pa·s	ASTM D3835
Injection	**Nominal Value**	**Unit**	
Drying Temperature	82.2 - 87.8	°C	
Drying Time	2.0 - 4.0	hr	
Drying Time, Maximum	6.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Shot Size	50 - 70	%	
Rear Temperature	171 - 182	°C	
Middle Temperature	193 - 204	°C	
Front Temperature	199 - 216	°C	
Nozzle Temperature	199 - 221	°C	
Processing (Melt) Temp	199 - 221	°C	
Mold Temperature	48.9 - 71.1	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	30 - 60	rpm	
Vent Depth	0.038 - 0.051	mm	

NOTE	
1.	5.0 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	1.3 mm/min
5.	1.3 mm/min
6.	标准 B (120°C/h), 载荷2 (50N)
7.	Tungsten electrode

Recommended distributors for this material

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