

Composite PP

FB51R

High impact flame-retardant PP composite

Application

Electrical and electronic parts, Air conditioner fan heater exterior Parts, Housing

Characteristics

Flame retardant (UL94 V-2 certification), Long term thermal resistance(UL746B), High heat resistance, Excellent dimensional stability, Excellent balance between rigidity and impact strength

Physical properties

Item	Test Method	Unit	Typical Value
Melt index (230°C)	ASTM D1238	g/10min	10
Specific gravity	ASTM D792	g/cm ³	0.93
Tensile strength (at yield)	ASTM D638	kg/cm ²	280
Elongation (at break)	ASTM D638	%	150
Flexural modulus	ASTM D790	kg/cm ²	12,500
Izod Impact Strength (23°C)	ASTM D256	kg cm/cm	11
Rockwell hardness	ASTM D785	R scale	85
Shrinkage Ratio	HTC METHOD	%	1.2 ~ 1.6
Heat distortion temperature	ASTM D648	°C	100
Flame-retardancy	UL94	-	V-2

Note: The above physical property value is a representative value for reference and is not a product quality standard.

Processing conditions

Item	Unit	Typical value
Cylinder temperature (rear)	°C	170 ~ 180
Cylinder temperature (middle)	°C	180 ~ 200
Cylinder temperature (front)	°C	180 ~ 200
Nozzle temperature	°C	190 ~ 210
Mold temperature	°C	40 ~ 70
Injection pressure	kg/cm ²	400 ~ 800
Back pressure	kg/cm ²	5 ~ 20
Injection speed	%	50 ~ 80

※ Actual injection conditions should be adjusted according to the type of injection machine, mold, and part size.

Certification

Hanwha TotalEnergies Petrochemical FB51R is not suitable for food packaging or medical supplies.

For further inquiries, please contact Hanwha TotalEnergies Petrochemical Composite Development Team.

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