

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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