Product Information

HIPS-5197 HF

Modified High-impact Polystyrene

version: 6.2

FEATURES	APPLICATIONS
• UL94 HB@1.5mm-3.2mm • High impact resistance • High flow	• Injection molding • Electric and electronic cabinet • Household appliances

Properties	Test Standard	Test Condition	S.I. Unit	S.I. Typical Value[1,2]
Mechanical				
Tensile Strength	ISO 527-2	50mm/min	MPa	25
Tensile Strain at Break	ISO 527-2	50mm/min	%	30
Flexural Strength	ISO 178	2mm/min	MPa	38
Flexural Modulus	ISO 178	2mm/min	MPa	2100
Izod Notched Impact Strength	ISO 180	23℃	kJ/m^2	11
Rockwell Hardness	ISO 2039/2	R-Scale	-	100
Thermal				
Temperature of Deflection Under Load	ISO 75	1.8MPa	℃	72
Vicat Softening Temperature	ISO 306	50N, 120℃/h	℃	90
Electrical				
Volume Resistivity	IEC 60093	-	Ω· cm	10^{16}
Others				
Molding Shrinkage	ISO 2577	23℃	%	0.4-0.7
Melt Mass-flow Rate(MFR)	ISO 1133-1	200℃, 5Kg	g/10min	14
Density	ISO 1183-1	23℃	g/cm^3	1.04
Flammability	UL94	1.5mm	Class	HB
		3.2mm	Class	HB

[1] These are typical values of the product's properties, and these values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes.
[2] The listed values are maybe different for pigmented material.

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Typical Processing Conditions

		Optimum	Range
Melt Temp.		220℃	210-240℃
Barrel Zone Temp.	Rear	190℃	180-210℃
	Center	210℃	200-230℃
	Front	220℃	210-240℃
Mold Temp.		50℃	30-80℃
Processing Temp. Upper Limit		250℃	
Injection Speed		Slow to Moderate	
Back Pressure		0-1000KPa	
Pre-dry Requirements		70~80℃, 2~4hr	

The parameter is just for referential purpose only. In actual processing, the parameter should be adjusted by construction of mold, shape and size of product, and so on.

SAFETY AND HANDLING CONSIDERATIONS

Material safety data sheets (MSDS) for resins are available from Kingfa Sci. & Tech. Co. Ltd. and its subsidiaries. MSDS sheets are provided to help customers satisfy their own handling, safety, and disposal needs, and those that may be required by locally applicable health and safety regulations.

The following comments are general and applied only to resins as supplied. Various additives and processing aids used in fabrication and other materials used in finishing steps have their own safe use profile and must be investigated separately.

Representative samples of the resins have been examined to assure that potential trace contamination levels of the substances above are not in excess of the applicable regulations. These resins have a very low degree of toxicity and under normal conditions of use should pose no unusual problems from ingestion, eye, or skin contact. However, caution is advised when handling, storing, using, or disposing of these resins and good housekeeping and controlling of dusts are necessary for safe handling of product. Workers should be protected from the possibility of contact with molten resin during fabrication.

Handling and fabrication of plastic resins can result in the generation of vapors and dusts. Dusts resulting from sawing, filing, and sanding of plastic parts in post-molding operations may cause irritation to eyes and the upper respiratory tract. In dusty atmospheres, use an approved dust respirator.

Good general ventilation of the polymer processing area is recommended. Processing may release fumes which may include polymer fragments and other decomposition products. Fumes can be irritating. At temperatures exceeding melt temperature, polymer fragments can occur. Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Use safety glasses. If there is a potential for exposure to particles which could cause mechanical injury to the eye, wear chemical goggles. Use gloves with insulation for thermal protection, when needed.

Color change of the product may be caused by UV exposure. So it is recommended that storage should keep in dry, cool place and avoid direct sunlight

We encourage customers and potential users of our products to review their applications for such products from the standpoint of human health and environmental quality. To help ensure that our products are not used in ways for which they were not intended or tested, our personnel will assist customers in dealing with ecological and product safety considerations. Your sales representative can arrange the proper contacts.

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