

## 312HGH-NP (HIPS)

**Description:**

High Gloss HIPS with very High Impact Strength

**Application:**

 AC grills, Washing Machine top,  
 Cap layer etc.,

Properties	Test Method	Test Condition	Unit	Typical Value
<b>Physical</b>				
Specific Gravity	ASTM D 792	-	-	1.03
Shrinkage	ASTM D 955	-	%	0.4-0.8
<b>Rheological</b>				
Melt Flow Index	ASTM D 1238 (G)	200 °C / 5 kg	gms / 10min	5.5
<b>Thermal &amp; Optical</b>				
Vicat Softening point	ASTM D 1525	120 °C / Hr, 1 kg	°C	97
Heat Deflection temperature	ASTM D 648	1.82 Mpa	°C	82
Flammability	UL 94	3.2 mm	Rating	HB
Gloss at 60° angle	ASTM D 2457	-	-	100
<b>Mechanical</b>				
Tensile Strength @ Yield, 3.2 mm	ASTM D 638	50 mm / min	Kg / cm <sup>2</sup>	300
Tensile Elongation @ Break, 3.2 mm	ASTM D 638	50 mm / min	%	40
Flexural Strength, 3.2 mm	ASTM D 790	1.3 mm / min	Kg / cm <sup>2</sup>	450
Flexural Modulus, 3.2 mm	ASTM D 790	1.3 mm / min	Kg / cm <sup>2</sup>	25000
Izod Impact Strength (Notched), 6.4 mm	ASTM D 256	-	Kg.cm / cm	9.5
Rockwell Hardness	ASTM D 785	-	R-Scale	103
<b>Processing Conditions</b>				
Melt Temperature	-	-	°C	180 - 220
Mold Temperature	-	-	°C	50 - 60
Pre-drying temperature	-	-	-	Not Required

**Note:**

- The above Typical values in this Product data sheet are intended to serve for material selection purpose only
- Values given should not be interpreted as specification and not be used for part or tool design.
- All properties, except melt flow rate are measured on injection molded specimens and after 48 hours storage at 23°C, 50% relative humidity.
- The design and Characteristics of the product manufactured out of LGPI material are beyond our control & expertise, therefore, LGPI shall not own the responsibility for any consequential damage incurred by the Purchaser.

Head Office :

# 601 &amp; 602, 6th Floor, A-Wing, Delphi Orchard Avenue, Hiranandani Gardens, Powai, Mumbai - 400 076

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## LG Polymers India Pvt. Ltd.

Regd. Office & Works : R R Venkatapuram, Visakhapatnam – 530 029, India  
CORPORATE IDENTITY NUMBER (CIN) : U25203AP1996PTC025917

## SolutionPartner

Visakhapatnam	: +91-891-2520455 -458	Fax : 91-0891-2520538
Mumbai	: +91-22-61085300 -332	Fax : 91-022-61085344
Gurgaon	: +91-0124-4962700 -711	Fax : 91-0124-4692700
Kolkatta	: +91-33-22897959	Fax : 91-033-22907392
Chennai	: +91-44-26650201	
Vijayawada	: +91-9849170565	

### **Processing guidelines:**

- 312HGH-NP can be Injection molded under different conditions depending upon the size of the machine, mold size & shape of the components.
- Pre-drying normally not required.

### **Recommended temperatures:**

- Melt Temperature profile: 180-220 °C
- Mould Temperature: 45-60 °C (Optimization of condition gives the best results)

Molding at a very low or very high temperature conditions than required, may cause degradation.

### **Packing:**

Supplied as cylindrical shaped granules in 25 kg PP laminated woven sack bags.

### **Storage & Handling precautions:**

LGPI recommends the storage of Polystyrene in dust free environment, dry & cool place in a shade an avoid direct exposure to sunlight

### **Product Safety:**

Processing may release fumes, which may be irritating. Sufficient ventilation should be provided in the processing area. If it causes eye discomfort, use a full-face respirator.

Handling & fabrication of plastic resin may result in the generation of dust. Dust resulting from sawing, filing & sanding of plastic parts in post molding operations may cause irritation to eyes. In dusty atmospheres, use an approved dust respirator.

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