

**HIGH IMPACT
POLYSTYRENE
(HIPS)**
DIAMOND HI-850
Characteristics:

- High impact,
- Standard flow, Good gloss
- Low volatility

Processing:

- Injection Molding
Grade

Applications:

- House ware, TV, Audio equipment parts, Drinking cups, Washing machines plastic parts, Air conditioners grills, Plastic refrigerator components, Toys, Stationery products, Sanitary products, Plastic Hangers etc.

Material Status :

TYPICAL PROPERTIES	TEST METHOD	UNIT	VALUES
Mechanical Properties			
Tensile Strength at Yield / at break	ASTM D-638	kgf/cm ²	220
Tensile Modulus	ASTM D-638	kgf/cm ²	13000
Tensile Elongation	ASTM D-638	%	50
Flexural Strength	ASTM D-790	kgf/cm ²	400
Flexural Modulus	ASTM D-790	kgf/cm ²	17000
Izod Impact Strength	ASTM D-256	kgf-cm/cm	12
Gardner Falling Dart	ASTM D-1709	In-lb	130
Thermal Properties			
Vicat Softening Temp	ASTM D-1525	°C	98
Heat Distortion Temp	ASTM D-648	°C	87
General Properties			
Melt Flow Rate MFR 200/5	ASTM D-1238	gm/10 min	6.0
Processing			
Specific Gravity	ASTM D-792	23/23 °C	1.05
Miscellaneous Properties			
Water Absorption		%	<0.1
Moisture Adsorption (23 C/50% r.h)		%	<0.1

Product Description	Diamond HI-850 is a High Impact Polystyrene grade with Opaque & matt finish surface. It gives excellent mechanical and heat resistance properties while providing with easy process ability and molding applications.
Processing	Although Polystyrene HI-850 can be processed by any method applicable to polystyrene based plastic, it is best suitable for injection molding. The melt temperatures should not exceed 260 °C.
Product Safety	During processing of Polystyrene HI-850, small quantity of Styrene Monomer may be released into the atmosphere. At styrene vapor concentrations below 20 ppm, no negative health effects are expected. In our experience, the concentration of styrene does not exceed 1 ppm in good ventilate workplace.
Form supplied & Storage	Polystyrene HI-850 is supplied as cylindrical shaped granules It has to be kept in its original containers in a dry, cool place, Avoid direct exposure to sunlight. Diamond HI-850 can also be stored in silos.
Food Legislation	If used unmodified and under appropriated processing conditions, Polystyrene HI-850 conforms with FDA title 21 CFR section 177.1640 regarding the use of in food contact articles. Diamond Polystyrene is also approved by PCSIR (Pakistan Council of Scientific & Industrial Research).
Environmental	Diamond polystyrene resins can be recycled , incinerated or disposed off in landfill without detriment to the environment. Adequate ventilation should be used during processing. Where recycling of Diamond Polystyrene is not possible, disposal to landfill or incineration in accordance with all applicable government laws and regulations is recommended. Generally speaking, in the environment lost pellets are not a problem except under unusual circumstances – when they enter the Marine environment. They are inert and benign in terms of their physical environmental impact, but if ingested by waterfowl or aquatic life, they may mechanically cause adverse effects. Spills should be minimized and they should be cleaned up when they happen. Plastics should not be discarded into the Ocean or any other body of water.

Note:

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