

## DIAMOND HI-861

### Characteristics:

- High Impact, Good gloss,
- Low volatility, Stress cracking  
resistant (Freon resistant)

### Processing:

- Extrusion Grade.

### Applications:

- Sheets and Lamination of Freezers  
and Deep freezers.

Material Status :

TYPICAL PROPERTIES	TEST METHOD	UNIT	VALUES
<b>Mechanical Properties</b>			
Tensile Strength at Yield / at break	ASTM D-638	kgf/cm <sup>2</sup>	230
Tensile Modulus	ASTM D-638	kgf/cm <sup>2</sup>	12000
Tensile Elongation	ASTM D-638	%	60
Flexural Strength	ASTM D-790	kgf/cm <sup>2</sup>	400
Flexural Modulus	ASTM D-790	kgf/cm <sup>2</sup>	16000
Izod Impact Strength	ASTM D-256	kgf-cm/cm	15
Gardner Falling Dart	ASTM D-1709	In-lb	147
<b>Thermal Properties</b>			
Vicat Softening Temp	ASTM D-1525	°C	100
Heat Distortion Temp	ASTM D-648	°C	90
<b>General Properties</b>			
Melt Flow Rate MFR 200/5	ASTM D-1238	gm/10 min	3.0
<b>Processing</b>			
Specific Gravity	ASTM D-792	23/23 °C	1.05
<b>Miscellaneous Properties</b>			
Water Absorption		%	<0.1
Moisture Adsorption (23 C/50% r.h)		%	<0.1

**Product Description**

Diamond HI-861 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-861 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-861, 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-861 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-861 can also be stored in silos.

**Food Legislation**

If used unmodified and under appropriated processing conditions, Polystyrene HI-861 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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