

Diamond HI-850

High Impact Polystyrene

Pak Petrochemical Industries (Pvt.) Ltd.

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Technical Data

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.

Characteristics:

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

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.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (English)
Availability	• Africa & Middle East • Asia Pacific • Europe
Features	• Food Contact Acceptable • Good Processability • Good Gloss • High Heat Resistance • Good Moldability • High Impact Resistance • Recyclable Material
Uses	• Appliance Components • Household Goods • Cups • Sanitary Products • Electrical/Electronic Applications • Stationary Supplies • Toys
Agency Ratings	• FDA 21 CFR 177.1640
Appearance	• Matte Finish • Opaque
Forms	• Granules
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity ³	1.05	1.05 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	6.0 g/10 min	6.0 g/10 min	ASTM D1238
Water Absorption			
73°F (23°C), 24 hr, 50% RH	< 0.10 %	< 0.10 %	
Equilibrium	< 0.10 %	< 0.10 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield	3130 psi	21.6 MPa	
Break	3130 psi	21.6 MPa	
Tensile Elongation (Break)	50 %	50 %	ASTM D638
Flexural Strength	5690 psi	39.2 MPa	ASTM D790

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Unnotched Izod Impact	2.2 ft·lb/in	120 J/m	ASTM D256
Gardner Impact	130 in·lb	14.7 J	ASTM D256

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	189 °F	87.0 °C	
Vicat Softening Temperature	208 °F	98.0 °C	ASTM D1525

Injection	Nominal Value (English)	Nominal Value (SI)
Processing (Melt) Temp	< 500 °F	< 260 °C



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Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² Typical properties: these are not to be construed as specifications.

³ 23°C

