

# Electric and Electronics (Home Appliances)



Home Appliance



Office Automation



Electronic Packaging


DIAREX: PS							
Properties	Test Method	Unit	Grade				
			H350	H350E	H820E	H950	H360
<b>Physical Properties</b>							
Melt Flow Rate (200 °C, 5 kg)	ASTM D1238	g/10 min	3.5	2.6	2.8	3	5
Vicat Softening Point (1 kg)*	ASTM D1525	°C	104	101	100	105	104
Deflection Temperature* (18.56 kg/cm <sup>2</sup> )	D648	°C	78	76	-	79	-
Gloss (60 ° Gardner)	D523	%	-	-	-	90	-
<b>Mechanical Properties</b>							
Tensile Strength at Yield	ASTM D638	lb/in <sup>2</sup>	4,250	4,000	3,600	4,900	4,800
Tensile Elongation	ASTM D638	%	55	53	50	50	40
Flexural Strength	ASTM D790	lb/in <sup>2</sup>	6,000	5,500	5,100	6,500	6,800
Flexural Modulus (x10,000)	ASTM D790	lb/in <sup>2</sup>	27	26	36	26	27
Izod Impact Strength	ASTM D256	ft.lb/in	2	2	2	2	2
Rockwell Hardness	ASTM D785	Scale	R112	R112	R112	R112	R112
Underwriter Laboratory*	UL-94		HB (1.5 mm)	HB (1.5 mm)	HB (1.5 mm)	HB (1.5 mm)	HB (1.5 mm)
<b>Type</b>			HIPS High Impact	HIPS High Impact	HIPS High ESCR	HIPS High Gloss	HIPS High Impact
<b>End Product</b>			Refrigerator accessories	E&E tray	Refrigerator liner	Refrigerator liner and accessories	
			Household appliance			Household appliance	
			Office automation apparatus	Household appliance	Extrusion sheet with high ESCR	Office automation apparatus	Air condition part
<b>Product Highlight</b>			Balance flowability and mechanical properties which suitable for injection.	Balance flowability and mechanical properties which suitable for extrusion and thermoforming	Good drawability with High ESCR for extrusion and thermoforming	High gloss high impact polystyrene with a good process ability and good heat resistance	Balance flowability and mechanical properties which suitable for injection.

Recommendation:  
DIAREX H360 can be processed with recommended temperature between 190 – 240 °C and mold temperatures between 30 and 70 °C.  
Melt temperature should not exceed 260 °C.  
Note: Modifications of the processing conditions based on the variations of the product design and machine configuration.


\*Data based on injection molding test pieces.

DIAREX: PS				
Properties	Test Method	Unit	Grade	
			THF77	THH102
<b>Physical Properties</b>				
MFR (200 °C, 5 kg)	ASTM D1238	g/10 min	8.4	2.6
Vicat Softening Point (1 kg)*	ASTM D1525	°C	101	106
<b>Mechanical Properties</b>				
Tensile Strength at Yield*	ASTM D638	lb/in <sup>2</sup>	6700	7500
Tensile Elongation*	ASTM D638	%	1.6	2.5
Izod Impact Strength*	ASTM D256	ft.lb/in	0.4	0.4
Rockwell Hardness*	ASTM D785	Scale	M80	M80
Deflection Temperature* (18.56 kg/cm <sup>2</sup> )	ASTM D648	°C	78	81
Underwriter Laboratory*	UL-94	-	HB(1.5 mm)	HB(1.5 mm)
<b>Type</b>			GPSS Standard	GPSS High Heat
<b>End Product</b>			Refrigerator and fan accessories	
<b>Product Highlight</b>			Good flow and clarity which a specific balance of flow and strength. This grade is recommended for injection application.	Balance flowability, strength, heat resistance, and good clarity. This grade is recommended for both extrusion and injection applications

\*Data based on injection molding test pieces.

Compound Resin			
Properties	Test Method	Unit	PlastMate C1809PJ-02
<b>Physical Properties</b>			
Melt Flow Rate (230 °C, 2.16 kg)	ASTM D1238	g/10 min	5
Density	ASTM D792	g/cm <sup>3</sup>	1.33
Mold Shrinkage	Internal Method	°C	0.2 - 0.4
<b>Mechanical Properties</b>			
Tensile Strength	ASTM D638	MPa	120
Elongation	ASTM D638	%	2
Flexural Modulus	ASTM D790	MPa	12,000
Notched Izod Impact Strength	ASTM D256	J/m	100
Rockwell Hardnes	ASTM D785	Scale	R107
<b>Thermal Properties</b>			
Vicat Softening Point	ASTM D648	°C	153
Heat Deflection Temperature	ASTM D1525	°C	148
<b>End Product</b>			 Injection Molded Part, Pulley
<b>Product Highlight</b>			Polypropylene Composite Reinforced with 50% Glass Fiber for Construction and Electrical Part.

Recommendation:  
Drying condition before use: 80 °C for 3 hours  
Barrel injection temperature: 190-230 °C  
Nozzle temperature: 210-230 °C  
Mold temperature: 40-60 °C

Compound Resin			
Properties	Test Method	Unit	PlastMate S908C
<b>Physical Properties</b>			
Melt Flow Rate (200 °C, 5.0 kg)	ASTM D1238	g/10 min	2.2
Density	ASTM D792	g/cm <sup>3</sup>	1.11
<b>Mechanical Properties</b>			
Tensile Strength at Yield	ASTM D638	MPa	31
Elongation at Break	ASTM D638	%	28
Tensile Modulus	ASTM D638	MPa	1,940
Flexural Strength	ASTM D790	MPa	54
Flexural Modulus	ASTM D790	MPa	2,480
Notched Izod Impact Strength	ASTM D256	J/m	168
<b>Thermal Properties</b>			
Vicat Softening Point	ASTM D1525	°C	89
Heat Deflection Temperature	ASTM D648	°C	79
<b>Electrical Properties</b>			
Surface Resistivity (at 23 °C, 50% RH)	ASTM D257	Ohm/square	10 <sup>3</sup> - 10 <sup>5</sup>
<b>End Product</b>			 Conductive Reel
<b>Product Highlight</b>			HIPS Compound with Conductive Property for Injection Application

Recommendation:  
Drying condition before use: 80 °C for 3 hours  
Barrel injection temperature: 190-230 °C  
Nozzle temperature: 210-230 °C Mold temperature: 40-60 °C

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose. All above values are typical values, not to be construed as specification.