

Electric and Electronics (Home Appliances)



Home
Appliance



Office
Automation




Electronic
Packaging


DIAREX: PS							
Properties	Test Method	Unit	Grade				
			H350	H350E	H820E	H950	H360
Physical Properties							
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/cm²)	D648	°C	78	76	-	79	-
Gloss (60 ° Gardner)	D523	%	-	-	-	90	-
Mechanical Properties							
Tensile Strength at Yield	ASTM D638	lb/in²	4,250	4,000	3,600	4,900	4,800
Tensile Elongation	ASTM D638	%	55	53	50	50	40
Flexural Strength	ASTM D790	lb/in²	6,000	5,500	5,100	6,500	6,800
Flexural Modulus (x10,000)	ASTM D790	lb/in²	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)
Type			HIPS High Impact	HIPS High Impact	HIPS High ESCR	HIPS High Gloss	HIPS High Impact
End Product			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	
Product Highlight			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
Physical Properties				
MFR (200 °C, 5 kg)	ASTM D1238	g/10 min	8.4	2.6
Vicat Softening Point (1 kg)*	ASTM D1525	°C	101	106
Mechanical Properties				
Tensile Strength at Yield*	ASTM D638	lb/in²	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/cm²)	ASTM D648	°C	78	81
Underwriter Laboratory*	UL-94	-	HB(1.5 mm)	HB(1.5 mm)
Type			GPSS Standard	GPSS High Heat
End Product			 Refrigerator and fan accessories	
Product Highlight			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
Physical Properties			
Melt Flow Rate (230 °C, 2.16 kg)	ASTM D1238	g/10 min	5
Density	ASTM D792	g/cm³	1.33
Mold Shrinkage	Internal Method	°C	0.2 - 0.4
Mechanical Properties			
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
Thermal Properties			
Vicat Softening Point	ASTM D648	°C	153
Heat Deflection Temperature	ASTM D1525	°C	148
End Product			 Injection Molded Part, Pulley
Product Highlight			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
Physical Properties			
Melt Flow Rate (200 °C, 5.0 kg)	ASTM D1238	g/10 min	2.2
Density	ASTM D792	g/cm³	1.11
Mechanical Properties			
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
Thermal Properties			
Vicat Softening Point	ASTM D1525	°C	89
Heat Deflection Temperature	ASTM D648	°C	79
Electrical Properties			
Surface Resistivity (at 23 °C, 50% RH)	ASTM D257	Ohm/square	10³ - 105
End Product			 Conductive Reel
Product Highlight			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.

Consumer Goods (Injection & Sheet)

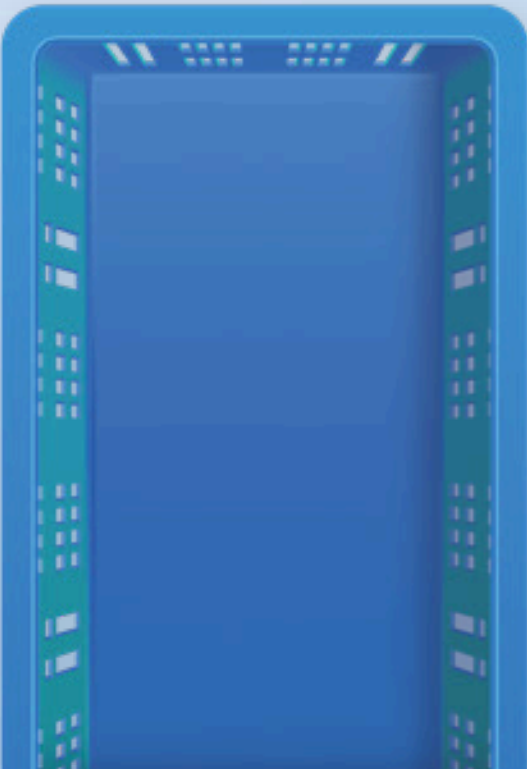
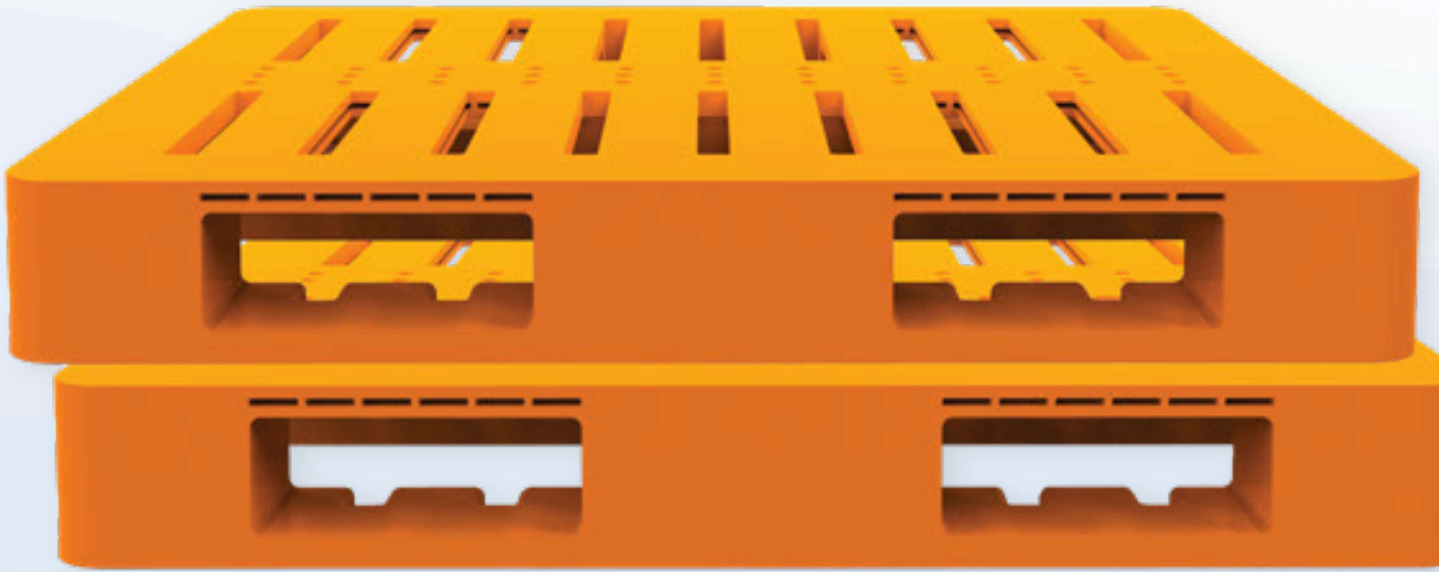
Rigid Packaging



InnoPlus: HDPE						
Properties	Test Method	Unit	Injection			
			HD1010J	HD1600J	HD2208J	HD2308J
MFR (190 °C, 2.16 kg)	ASTM D1238	g/10 min	20	12	3.7	6
Density	ASTM D1505	g/cm³	0.956	0.958	0.961	0.962
Melting Temperature	ASTM D3418	°C	130	132	134	136
Tensile Strength at Yield	ASTM D638	kg/cm²	290	280	310	300
Tensile Strength at Break	ASTM D638	kg/cm²	140	150	220	170
Elongation at Break	ASTM D638	%	200	210	>1,000	>1,000
Flexural Modulus	ASTM D790	kg/cm²	12,000	12,500	13,000	15,000
Notched Izod Impact Strength	ASTM D256	kg.cm/cm	4 (C*)	3 (C*)	5 (C*)	4 (C*)
Durometer Hardness	ASTM D2240	shore D	64	64	65	65
Vicat Softening Point	ASTM D1525	°C	122	125	122	125
ESCR; 25% Igepal, F ₅₀	ASTM D1693	Hours	Initial	Initial	6	5
UV Stabilizer			No	No	Yes	Yes
End Product			Small part, Stationery, Household products, Toys		UV added for outdoor application, Garbage bins, Pallets, Crates	

Note : *C = Complete Break *P = Partial Break *NB = Non Break

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DIAREX: PS				
HIPS High Impact				
Properties	Test Method	Unit	Injection	Extrusion
			H350	H350E
MFR (200 °C, 5 kg)	ASTM D1238	g/10 min	3.5	2.6
Tensile Strength @ Yield*	ASTM D638	kg/cm²	298	281
		lb/in²	4,250	4,000
Tensile Elongation*	ASTM D638	%	55	53
Flexural Strength*	ASTM D790	kg/cm²	420	386
		lb/in²	6,000	5,500
Flexural Modulus (× 10,000)*	ASTM D790	kg/cm²	1.9	1.8
		lb/in²	27	26
Izod Impact Strength*	ASTM D256	kg.cm/cm	11	11
		ft.lb/in	2	2
Rockwell Hardness*	ASTM D785	Scale	R112	R112
Vicat Softening Point (1 kg)*	ASTM D1525	°C	104	101
		°F	219	213
Deflection Temperature* (18.56 kg/cm²)	ASTM D648	°C	78	76
		°F	172	169
Underwriter Laboratory*	-	-	UL-94HB	UL-94HB

*Data based on injection molding test pieces.

DIAREX: PS						
GPPS Standard						
Properties	Test Method	Unit	Grade			
			THF77	THH102	THH103	TMF35
Physical Properties						
MFR (200 °C, 5 kg)	ASTM D1238	g/10 min	8.4	2.6	1.7	4.5
Density	ASTM D792	g/cm³	-	-	-	1.05
Vicat Softening Point (1 kg)*	ASTM D1525	°C	101	106	107	104
		°F	214	223	225	219
Deflection Temperature* (18.56 kg/cm²)	ASTM D648	°C	78	81	82	79
		°F	172	178	180	174
Mechanical Properties						
Tensile Strength @ Yield*	ASTM D638	kg/cm²	470	530	543	485
		lb/in²	6,700	7,500	7,700	6,900
Tensile Elongation*	ASTM D638	%	2	2.5	2.6	2.0
Izod Impact Strength*	ASTM D256	kg.cm/cm	2.2	2.2	2.2	2.2
		ft.lb/in	0.4	0.4	0.4	0.4
Rockwell Hardness*	ASTM D785	Scale	M80	M80	M80	M80
Underwriter Laboratory*	-	-	UL-94HB	UL-94HB	UL-94HB	UL-94HB
Type						GPPS Standard

*Data based on injection molding test pieces.