



# Hylac® GP55

Ravago Manufacturing Americas, LLC - Acrylonitrile Butadiene Styrene

Monday, 18 November 2013

## General Information

### General

Material Status	• Commercial: Active
Availability	• North America
Features	• General Purpose • High Impact Resistance
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Injection Molding

## ASTM and ISO Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (200°C/5.0 kg)	1.5	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	17	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.30 to 0.70	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2520	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	45.5	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	25	%	ASTM D638
Flexural Modulus (23°C)	2410	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	70.3	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
23°C, 3.18 mm	290	J/m	
23°C, 6.35 mm	260	J/m	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	109		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	97.2	°C	ASTM D648
Deflection Temperature Under Load 1.8 MPa, Unannealed	87.2	°C	ASTM D648
Vicat Softening Temperature	101	°C	ASTM D1525
CLTE - Flow (-40 to 80°C)	0.00011	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohm·cm	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94

### Additional Information

Melt Flow Index, ASTM D1238, 230°C, 3.8kg, Cond I: 5.6 g/10min  
Volume Resistivity, ASTM D257: >10<sup>15</sup> ohm-cm  
CLTE, ASTM D696, -40°C to 80°C, Annealed: 6.2e-5 in/in/°F

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## Processing Information

Injection	Nominal Value	Unit
Suggested Max Moisture	0.10	%
Suggested Shot Size	40 to 80	%
Rear Temperature	179 to 199	°C
Middle Temperature	199 to 221	°C
Front Temperature	216 to 235	°C
Nozzle Temperature	210 to 229	°C
Melt Temperature (Aim)	241	°C
Mold Temperature	48.9 to 60.0	°C
Injection Pressure	5.86 to 6.89	MPa
Injection Rate	Slow-Moderate	
Holding Pressure	4.90 to 5.86	MPa
Back Pressure	0.483 to 0.965	MPa
Screw Speed	50 to 90	rpm

### Injection Notes

Hylac™ ABS should be dried prior to melt processing. Hylac™ ABS resins exhibit an equilibrium moisture content of 0.3% to 0.4% at 73°F and 50% relative humidity. This moisture content increases between 0.6% and 0.8% at 90% relative humidity. Although the proper amount of drying depends on the relative humidity, the ratio of regrind to virgin resin and the storage period of the resin, it is recommended that Hylac™ ABS resins be dried at 175-185°F (80-85°C) for 3 hours. A moisture level of < 0.1% or = 0.1% should be reached before injection molding the resin.

Pressures given are in the hydraulic circuit.

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.