



Hybrid S459

Ravago Manufacturing Americas, LLC - Acrylonitrile Butadiene Styrene + PC

Friday, 18 April 2014

General Information

General

Material Status	• Commercial: Active
Availability	• North America
Features	• General Purpose
Uses	• General Purpose
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• CHRYSLER MS-DB195 Type A • CHRYSLER MS-DB195 Type A • GM GMP.ABS+PC.012 Color: CPN2595 Color: Gray CPN2595 Color: Natural Gray
UL File Number	• E157012
Forms	• Pellets
Processing Method	• Injection Molding

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm ³	ASTM D792
Density	1.11	g/cm ³	ISO 1183
Melt Mass-Flow Rate			ASTM D1238
230°C/3.8 kg	2.7	g/10 min	
260°C/2.16 kg	5.7	g/10 min	
260°C/5.0 kg	20	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
230°C/3.8 kg	2.40	cm ³ /10min	
260°C/2.16 kg	5.10	cm ³ /10min	
260°C/5.0 kg	18.0	cm ³ /10min	
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Water Absorption (24 hr)	0.090	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, 23°C)	52.4	MPa	ASTM D638
Tensile Stress (Yield, 23°C)	52.0	MPa	ISO 527-2
Tensile Elongation (Break, 23°C)	50	%	ASTM D638
Tensile Strain (Break, 23°C)	50	%	ISO 527-2
Flexural Modulus (23°C)	2340	MPa	ASTM D790
Flexural Modulus (23°C)	2250	MPa	ISO 178
Flexural Strength (Yield, 23°C)	72.4	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	560	J/m	ASTM D256
Notched Izod Impact Strength (23°C)	39	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	120	°C	
Heat Deflection Temperature (0.45 MPa, Unannealed)	122	°C	ISO 75-2/B

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed	100	°C	ASTM D648
Heat Deflection Temperature (1.8 MPa, Unannealed)	103	°C	ISO 75-2/A
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94

Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	104 to 110	°C	
Drying Time	2.0 to 4.0	hr	
Drying Time, Maximum	10	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	232 to 243	°C	
Middle Temperature	238 to 260	°C	
Front Temperature	243 to 271	°C	
Nozzle Temperature	243 to 271	°C	
Mold Temperature	65.6 to 82.2	°C	
Injection Pressure	5.52 to 12.4	MPa	
Injection Rate	Moderate		
Back Pressure	0.345 to 1.03	MPa	
Screw Speed	40 to 60	rpm	

Notes

¹ Typical properties: these are not to be construed as specifications.