

# Polifil® ABS RP-ABS

Acrylonitrile Butadiene Styrene

The Plastics Group

## Message:

Polifil® RP-ABS is a styrenic resin with improved toughness and heat resistance versus HIPS grades. ABS exhibits high gloss, low shrinkage, and good dimensional stability. ABS is widely used in injection molding of appliances, furniture, and automotive parts. ABS also has high melt strength suitable for the production of extruded sheet, some of considerable size and thickness. Applications include panels for large appliances and thermoformed items such as hot tubs and recreational vehicle parts. Use this information as a guide to aid you in selecting the proper resin for your application. TPG will custom compound and fine-tune our formulations for your application.

General Information	
Recycled Content	Yes
Features	Good Dimensional Stability
	Good Melt Strength
	Good Toughness
	High Gloss
	High Heat Resistance
Uses	Low Shrinkage
	Appliances
	Automotive Applications
	Furniture
	Sheet
Forms	Pellets, Reprocessed
Processing Method	Injection Molding
	Sheet Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.0 to 10	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.50	%	ASTM D955
Water Absorption (24 hr)	0.20	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	98		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2000	MPa	ASTM D638
Tensile Strength (23°C)	44.1	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	4.0	%	
Break, 23°C	20	%	

Flexural Modulus - Tangent (23°C)	2480	MPa	ASTM D790
Flexural Strength (23°C)	65.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	190	J/m	ASTM D256
Gardner Impact (23°C, 12.7 mm)	11.3	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	96.1	°C	
1.8 MPa, Unannealed	90.6	°C	

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#### Recommended distributors for this material

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