

# API PS 545-21

High Impact Polystyrene  
American Polymers, Inc.

Message:

API PS 545-21 is a High Impact Polystyrene material. It is available in North America for extrusion, injection molding, or thermoforming.  
Important attributes of API PS 545-21 are:  
Heat Resistant  
Impact Modified  
Typical applications include:  
Caps/Lids/Closures  
Containers

General Information			
Additive	Impact Modifier		
Features	Good Colorability		
	High Heat Resistance		
	Impact Modified		
Uses	Drink Lids		
	Food Containers		
Appearance	Colors Available		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	46		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1860	MPa	ASTM D638
Tensile Strength (Yield)	27.6	MPa	ASTM D638
Tensile Elongation (Break)	40	%	ASTM D638
Flexural Modulus	2550	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	100	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	87.8	°C	ASTM D648

Vicat Softening Temperature	97.2	°C	ASTM D1525
Injection	Nominal Value	Unit	
Drying Temperature	71.1 to 82.2	°C	
Drying Time	2.0	hr	
Suggested Max Regrind	30	%	
Rear Temperature	177 to 232	°C	
Front Temperature	191 to 274	°C	
Mold Temperature	-6.67 to 71.1	°C	
Injection Pressure	34.5 to 276	MPa	
Back Pressure	0.0689 to 3.45	MPa	

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#### Recommended distributors for this material

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