



# NATIONWIDE PLASTICS, INC.

The Authority on Plastics Manufacturing and Distribution

## R-Cast™ Product Data Sheet



Way Beyond Ordinary.

R-Cast™ is high performance acrylic with outstanding UV, optical and light transmission properties. Cast acrylic weighs half as much as glass and has up to seventeen times greater impact resistance than glass. R-Cast™ technology allows for the highest quality cast acrylic sheet, rod and tube in the industry worldwide.



### R-Cast™ Average Physical Properties

Property	ASTM Method	US Customary Units	Average Value	Metric Units	Average Value
<b>MECHANICAL</b>					
• Tensile Strength	ASTM - D638	psi	10,800	Kg/cm <sup>2</sup>	759
• Tensile Modulus	ASTM - D638	psi	450,000	Kg/cm <sup>2</sup>	31 x 10 <sup>3</sup>
• Tensile Elongation	ASTM - D638	%	4.6		
• Flexural Strength	ASTM - D790	psi	16,000	Kg/cm <sup>2</sup>	1125
• Compression Strength	ASTM - D695	psi	17,500	Kg/cm <sup>2</sup>	1230
• Compressive Deformation	ASTM - D621	%	0.36		
• Shear Strength	ASTM - D732	psi	10,000	Kg/cm <sup>2</sup>	703
• IZOD Impact Strength, notched @ 1/8"	ASTM - D256A	ft-lbs/in	0.414	J/m	22.1
• Rockwell Hardness (M Scale)	ASTM - D785		103		
• Deformation Under Load @ 4,000 psi @ 73° F	ASTM - D621	%	0.36		
<b>OPTICAL</b>					
• Light Transmittance, (0.1" nominal thickness)	ASTM - D1003	%	92		
• Haze		%	<1		
• Refractive Index @ 77° F	ASTM - D542A		1.49		
<b>THERMAL</b>					
• Heat Deflection Temperature	ASTM - D648	°F	226	°C	108
• Coefficient of Expansion, @ 60° F	ASTM - D696	in/in/°F	4.0 x 10 <sup>-5</sup>	mm/mm/°C	7.2
<b>MISCELLANEOUS</b>					
• Water Absorption, Equilibrium, 24 hrs @ 73° F	ASTM - D570	%	0.16		
• Specific Gravity	ASTM - D792		1.19		

For additional information about R-Cast™ products, please contact:  
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