

# Crystal Clear® 221

Polyurethane  
Smooth-On, Inc

Message:

Crystal Clear® 220 & 221 are water white clear resins made specifically for applications that require absolute clarity. These are "heat cure" systems and are harder versions of our popular Crystal Clear® Series resins (Shore 85D). Cured castings are UV Resistant (resists yellowing due to ultra-violet light exposure) and are not brittle. Vibrant colors and color effects are achieved by adding pigment dispersions. Applications include encapsulation, making prototype models, lenses, sculpture reproductions, decorative cast pieces, jewelry, special effects and props.

General Information			
Features	Good Color Stability		
	Good Colorability		
	Good UV Resistance		
	High Clarity		
	High Hardness		
Uses	Decorative Parts		
	Jewelry		
	Lenses		
	Modeling Material		
Appearance	Clear/Transparent		
Processing Method	Casting		
	Encapsulating		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.07	g/cm <sup>3</sup>	ASTM D1475
Specific Volume	0.936	cm <sup>3</sup> /g	ASTM D1475
Demold Time	Overnight Followed By Post-Cure		
Casting Thickness	Variable	in	
Mixing Ratio	100A:75B by weight		
Molding Shrinkage - Flow	1.7	%	ASTM D2566
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	85		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	197	MPa	ASTM D638
Tensile Strength (Break)	56.5	MPa	ASTM D638
Tensile Elongation (Break)	12	%	ASTM D638
Flexural Modulus	2100	MPa	ASTM D790
Flexural Strength	78.6	MPa	ASTM D790
Compressive Modulus	600	MPa	ASTM D695

Compressive Strength	69.6	MPa	ASTM D695
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	80.0	°C	ASTM D648
Thermoset	Nominal Value	Unit	Test Method
Pot Life	75	min	
Thermoset Mix Viscosity	675	cP	ASTM D2393

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#### Recommended distributors for this material

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