

## Bomar<sup>®</sup> BR-643 Polybutadiene Urethane Acrylate

### APPLICATIONS

- Coatings for Electronics
- Potting Compounds

### FEATURES & BENEFITS

- Excellent Hydrophobic Properties
- Acid/Base Resistance
- Curable with Radiation
- Improves Adhesion
- Low Water Absorption

### FEATURES & BENEFITS

- Low Temperature Flexibility
- Excellent Dielectric Properties
- Exhibits Hydrolytic Stability
- Gloss Finish

Bomar<sup>®</sup> BR-643 is a polybutadiene (PBD) urethane acrylate. Designed to meet rigorous electronic applications, BR-643 has many desirable properties typical to PBD resins, combined with radiation curability. In applications requiring thermal cycling resistance, BR-643 withstands the extremes of temperature typical of such tests, without undue degradation of properties.

### UNCURED PROPERTIES

Property	Value
Viscosity, cP (50°C)	65,000
Pt-Co (APHA) Color	50
Refractive Index (25°C)	1.508
Density, g/cm <sup>3</sup> (25°C)	0.95

### TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	H50	TP50	TM50
BR-643	70	50	50	50	50
IBOA	30	50			
HDDA			50		
TPGDA				50	
TMPTA					50
Omnirad <sup>™</sup> 481	2	2	2	2	2
Viscosity, 25°C*	18,875	2,050	900	2,250	N/A

\* Brookfield – Small Samples Adapter

### CURED MECHANICAL PROPERTIES

Property	I30	I50	H50	TP50	TM50
Tensile Strength, psi**	1,055	2,670	1,470	2,030	INCOMPATIBLE
Elongation, %**	53	65	3	23	
Elastic Modulus, ksi**	7.7	80.3	66.3	39.8	
Durometer Hardness	84A	58D	76D	69D	
MEK Double Rubs (#)	10	7	>200	40	
Water Absorption (%)	0.04	0.03	N/A	N/A	

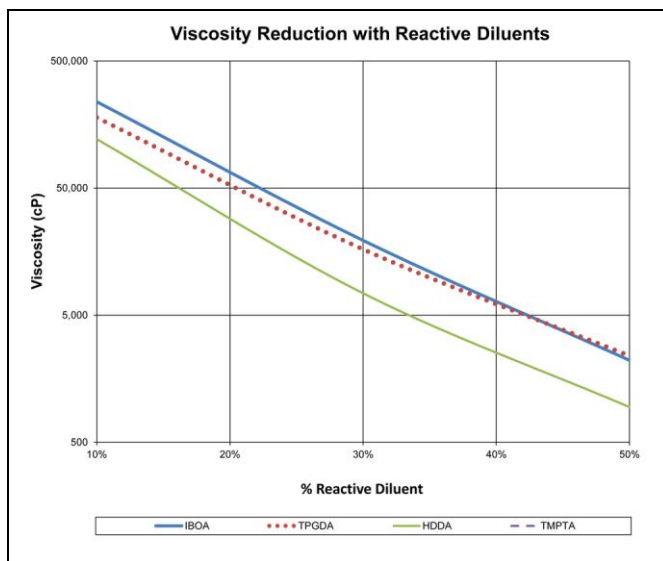
T<sub>g</sub> (DMA) = -16°C; Peak tan delta; cured with 2 phr of Omnirad<sup>™</sup> 481

\*\* Per ASTM D882

### ADHESION PROPERTIES

Substrate	I30	I50	H50	TP50	TM50
ABS			✓✓✓	✓✓✓	INCOMPATIBLE
Acrylic					
Aluminum					
Cold Rolled Steel	✓	✓			
Glass		✓			
HDPE					
Mylar					
Nylon					
Polycarbonate			✓✓		
Polystyrene					
PVC			✓✓		
Stainless Steel	✓	✓✓			

✓ Recommended    ✓✓ Highly Recommended    ✓✓✓ Strongly Recommended



Brookfield – CAP2000+ @ 25°C

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