

## Bomar™ BR-640D Polybutadiene Urethane Acrylate Oligomer

### APPLICATIONS

- Electronic Coatings
- Potting Compounds
- Anti-fog Coatings & Inks

### FEATURES & BENEFITS

- Excellent Hydrophobic Properties
- Acid/Base Resistant
- Low Water Absorption

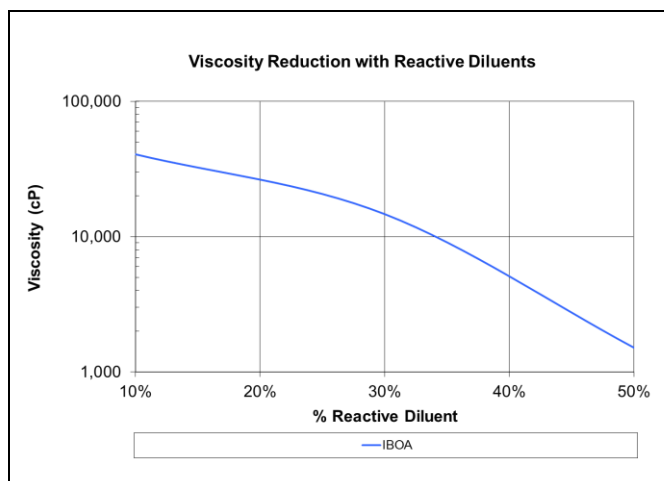
### FEATURES & BENEFITS

- Low Temperature Flexibility
- Excellent Dielectric Properties

Bomar™ BR-640D is a polybutadiene (PBD) urethane acrylate with a functionality of two. Designed to meet rigorous electronic applications, BR-640D has many desirable properties typical to PBD resins, combined with radiation curability. In applications requiring thermal cycling resistance, BR-640D withstands the extremes of temperature typical of such tests, without undue degradation of properties. Excellent hydrophobic properties exhibited where 0.012 and 0.037% water was absorbed by cured coating when submerged in water for 24 hours. In addition to the adhesion properties listed in the table below, BR-640D showed excellent adhesion to ABS, acrylic, nylon-6, PVC, and PS.

### UNCURED PROPERTIES

Property	Value
Viscosity, cP (50°C)	9,000
Pt-Co (APHA) Color	20
Refractive Index (25°C)	1.48
Density, g/cm <sup>3</sup> (25°C)	0.94



Brookfield – CAP2000 + @ 25°C

### TYPICAL FORMULATIONS

Test Formulation Name	I30	I50
BR-640D	70	50
IBOA	30	50
HDDA		
TPGDA		
TMPTA		
Omnirad™ 481	2	2
Viscosity, 25°C *	14,700	1,500

\* Brookfield – CAP2000 + @ 25°C

### CURED MECHANICAL PROPERTIES

Property	I30	I50
Tensile Strength, psi**	540	840
Elongation, %**	190	185
Elastic Modulus, ksi**	0.27	0.65
Durometer Hardness	76A	45D
MEK Double Rubs (#)	65	9
Water Absorption (%)	0.012	0.037
T <sub>g</sub> (DMA) = 33°C; Peak tan delta; cured with 2 phr of Omnirad™ 481		

\*\* Per ASTM D882

### ADHESION PROPERTIES

Substrate	I30	I50
Aluminum	✓✓	✓✓✓
Cold Rolled Steel	✓✓	✓✓✓
Glass	✓	✓
HDPE	✓	
Polycarbonate	✓	✓✓✓
Stainless Steel	✓✓✓	✓✓✓

✓ Recommended    ✓✓ Highly Recommended    ✓✓✓ Strongly Recommended

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