

## Bomar™ BRC-443 Hydrophobic Urethane Acrylate

**APPLICATIONS**

- Coatings and Inks for Steel
- Coatings and Inks for Plastic
- Coatings and Inks for Glass

**FEATURES**

- Improves Adhesion
- Enhances Hardness
- Non-Yellowing
- Low Water Absorption
- High Temperature Resistance

**FEATURES**

- Increases Weatherability
- Provides Abrasion Resistance
- Gloss Finish
- Provides Acid and Alkaline Resistance

Bomar™ BRC-443 is a difunctional, hydrophobic urethane acrylate which can be formulated to be used in heavy-duty industrial and commercial applications. The resulting tough film makes an effective non-yellowing, protective single-coating that extends the substrate's use-life. The low water absorption and acid and alkaline resistance make this oligomer perfect for the following industries: aerospace, appliance, automotive, electronics, industrial, medical device, metal finishing, and UV-curable inks & coatings. BRC-443 exhibits retention of mechanical properties after exposure to high temperatures (200°C for 30 minutes). In addition to the adhesion properties listed in the table below, BRC-443 also shows excellent adhesion to ABS, PVC, PMMA, Nylon-6, and Polystyrene.

**UNCURED PROPERTIES**

Property	Value
Viscosity, cP (50°C)	30,000
Pt-Co (APHA) Color or Gardner Color	20
Refractive Index (25°C)	1.48
Density, g/cm <sup>3</sup> (25°C)	1.09

**TYPICAL FORMULATIONS**

Test Formulation Name	I30	I50	TP50	H50	HE30
BRC-443	70	50	50	50	70
IBOA	30	50			
HEMA					30
TPGDA			50		
HDDA				50	
Omnirad™ 481	2	2	2	2	2
Viscosity, 25°C *	14,500	1,693	1,914	755	4,172

\* Brookfield – CAP 2000+ @ 25°C

**CURED MECHANICAL PROPERTIES**

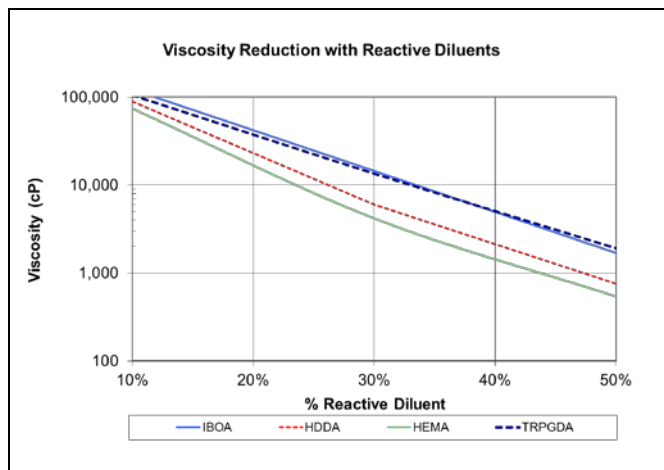
Property	I30	I50	TP50	H50	HE30
Tensile Strength, psi**	1,500	1,550	1,330	1,400	1,200
Elongation, %**	220	95	14	6.5	180
Elastic Modulus, ksi**	0.8	9.5	23	30	1.1
Durometer Hardness	56D	72D	70D	74D	40D
MEK Double Rubs (#)	18	17	20	14	15
Water Absorption (%)	0.3	0.2	0.4	0.3	2.4
T <sub>g</sub> (DMA) = 34°C; Peak tan delta; cured with 2 phr of Omnirad™ 481					

\*\* Per ASTM D882

**ADHESION PROPERTIES**

Substrate	I30	I50	TP50	H50	HE30
Aluminum	✓✓✓	✓✓✓			
Cold Rolled Steel	✓✓✓	✓✓✓	✓	✓	
Glass	✓✓✓	✓✓✓			
HDPE					
Polycarbonate	✓✓✓	✓✓✓	✓✓	✓✓✓	
Stainless Steel	✓✓✓	✓✓✓			

✓ Recommended    ✓✓ Highly Recommended    ✓✓✓ Strongly Recommended



Brookfield – CAP 2000+ @ 25°C

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Technical Data Collection Prior to 2014 02/17/2015

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