

Bomar™ BRC-443D Hydrophobic Urethane Acrylate

APPLICATIONS

- Nail Gels
- Coatings and Inks for Plastic
- Coatings and Inks for Glass

FEATURES

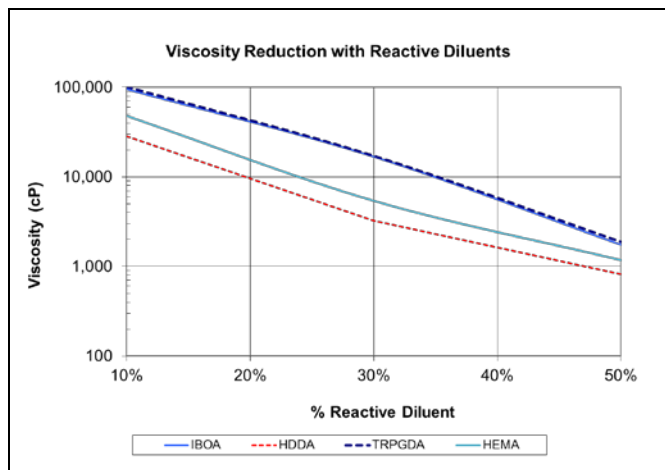
- Low MeHQ
- Improves Adhesion
- Enhances Hardness
- Non-Yellowing
- Low Water Absorption
- High Temperature Resistance

FEATURES

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

Bomar™ BRC-443D 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-443D exhibits retention of mechanical properties after exposure to high temperatures (200°C for at least 30 minutes). In addition to the adhesion properties listed in the table below, BRC-443D also shows excellent adhesion to ABS, PVC, PMMA, Nylon-6, and Polystyrene.

UNCURED PROPERTIES	
Property	Value
Viscosity, cP (50°C)	20,000
Pt-Co (APHA) Color or Gardner Color	20
Refractive Index (25°C)	1.48
Density, g/cm ³ (25°C)	1.05



Brookfield – CAP 2000+ @ 25°C

TYPICAL FORMULATIONS					
Test Formulation Name	I30	I50	TP50	H50	HE30
BRC-443D	70	50	50	50	70
IBOA	30	50			
TMPTA					
TPGDA			50		
HDDA				50	
HEMA					30
Omnirad™ 481	2	2	2	2	2
Viscosity, 25°C *	16,800	1,750	1,900	800	5,400

* Brookfield – CAP 2000+ @ 25°C

CURED MECHANICAL PROPERTIES					
Property	I30	I50	TP50	H50	HE30
Tensile Strength, psi**	2,775	3,000	2,900	3,350	2,900
Elongation, %**	200	100	20	10	220
Elastic Modulus, ksi**	2.8	14.1	37	60	3.3
Durometer Hardness	62D	75D	73D	75D	46D
Water Absorption (%)	0.2	0.2	0.4	0.3	1.4
MEK Double Rubs (#)	6	8	19	35	40
T _g (DMA) = 41°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

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