

## Bomar™ BR-345 Polyether Urethane Acrylate

**APPLICATIONS**

- **Rapid prototyping**

**FEATURES**

- **Color Stability for Better Aesthetics**
- **Easy to Paint or Finish for Better-Looking Products**
- **Low Moisture Absorption to Minimize Distortion of Parts**

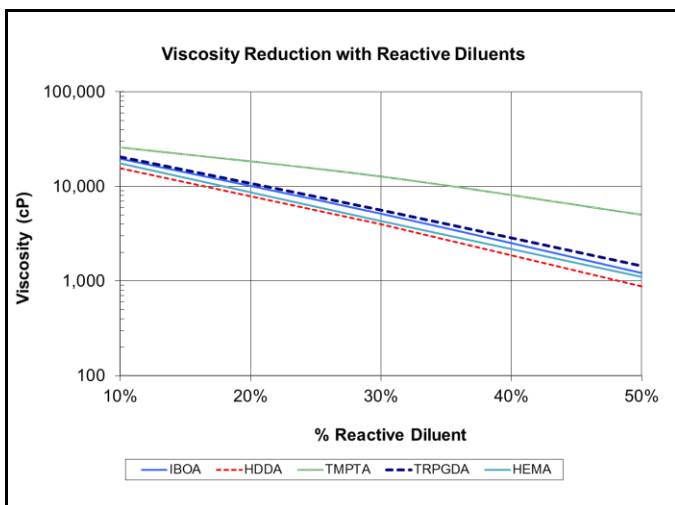
**FEATURES**

- **Low Tg and very high elongation**
- **Soft Surface Hardness**
- **High Elongation for Impact Resistance**

Bomar™ BR-345 is a difunctional polyether urethane acrylate that provides unique properties for 3D printing resins. This soft material is ideal for use in applications where high elongation is desired, and can be used as an additive for impact resistance. Resins with less than 1000 cps can be formulated with this material when monomer levels are above 50%.

**UNCURED PROPERTIES**

Property	Value
Viscosity, cP (25°C)	46,000
Pt-Co (APHA) Color or Gardner Color	<50
Refractive Index (25°C)	1.49
Density, g/cm <sup>3</sup> (25°C)	1.06



Brookfield – CAP 2000+ @ 25°C

**TYPICAL FORMULATIONS**

Test Formulation Name	I30	I50	TP50	TM50	H50	HE30
BR-345	70	50	50	50	50	70
IBOA	30	50				
TMPTA				50		
TPGDA			50			
HDDA					50	
HEMA						30
Omnirad™ 481	2	2	2	2	2	2
Viscosity, 25°C *	5,150	1,200	1,450	5,000	900	4,300

\* Brookfield – CAP 2000+ @ 25°C

**CURED MECHANICAL PROPERTIES**

Property	I30	I50	TP50	TM50	H50	HE30
Tensile Strength, psi**	130	1,400	1,100	1,700	700	150
Elongation, %**	260	2,300	25	6	6	370
Elastic Modulus, ksi**	.06	.06	8	37	17	0.04
Durometer Hardness	38A	50A	40D	65D	42D	35A
Water Absorption (24 hrs)	1.10	0.64	1.31	1.51	1.16	6.14
MEK Double Rubs (#)	8	5	4	10	6	5

T<sub>g</sub> (DMA) = -57°C; Peak tan delta; cured with 2 phr of Omnirad™ 481

\*\* Per ASTM D882

**ADHESION PROPERTIES**

Substrate	I30	I50	TP50	TM50	H50	HE30
Aluminum		✓✓				✓
Cold Rolled Steel		✓✓			✓	
Glass		✓✓				
HDPE		✓✓				
Polycarbonate	✓	✓✓	✓✓		✓✓	
PET	✓	✓✓			✓	✓
PMMA	✓	✓✓	✓		✓✓	
Stainless Steel	✓	✓✓				✓✓

✓ Recommended    ✓✓ Highly Recommended    ✓✓✓ Strongly Recommended

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