

Bomar[®] BR-345 Difunctional Aliphatic Polyether Urethane Acrylate

APPLICATIONS

- Rapid prototyping
- Concrete coating flexibilizer

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

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 cP can be formulated with this material when monomer levels are above 50%.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (25°C)	42,000
Pt-Co (APHA) Color	5
Refractive Index (25°C)	1.456
Density, g/cm ³ (25°C)	1.01

CURED MECHANICAL PROPERTIES

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psi**	95	600	1,500	1,100	1,100	110
Elongation, %**	120	400	2.6	19.4	6.5	290
Elastic Modulus, ksi**	0.15	0.66	65	20	25	-
Durometer Hardness	21A	32A	61D	36D	93A	25A
Water Absorption, % (24 hrs)	1.21	0.82	1.69	1.51	1.29	6.82
MEK Double Rubs (#)	4	4	10	5	6	10

T_g (DMA) = -42°C; Peak tan delta; cured with 2 phr of Omnirad[®] 184

** Per ASTM D882

ADHESION PROPERTIES

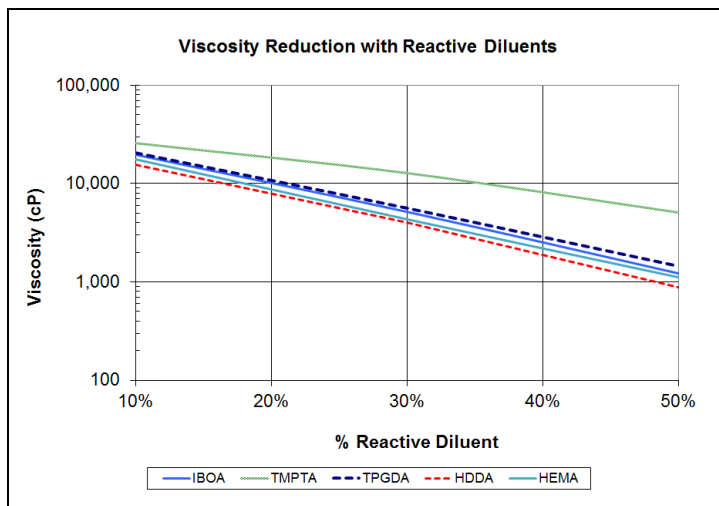
Substrate	I30	I50	TM50	TP50	H50	HE30
ABS		✓	✓		✓	
Aluminum						
Cold Rolled Steel		✓				✓✓
Glass						✓
HDPE						
PET		✓✓	✓	✓	✓	✓✓
PMMA			✓✓	✓	✓	
Polycarbonate		✓	✓✓✓	✓✓	✓	
Polypropylene		✓	✓			
PVC		✓	✓		✓	
Stainless Steel		✓				

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
BR-345	70	50	50	50	50	70
IBOA	30	50				
TMPTA			50			
TPGDA				50		
HDDA					50	
HEMA						30
Omnirad [™] 184	2	2	2	2	2	2
Viscosity, 25°C *	5,500	1,400	4,800	1,500	900	4,200

* Brookfield – CAP 2000+ @ 25°C.



Brookfield – CAP 2000+ @ 25°C

GENERAL INFORMATION

This product is intended for industrial use only. Keep out of the reach of children. Avoid breathing vapors. Avoid contact with skin, eyes, and clothing. Wear impervious gloves. Repeated or continuous skin contact with uncured material may cause irritation. Remove material from skin with soap and water. Never use organic solvents to remove material from skin and eyes. For more information on the safe handling of this material, please refer to the I Safety Data Sheet before use.

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