

## Bomar<sup>®</sup> BRC-4421 Difunctional Aliphatic Hydrophobic Urethane Acrylate

**APPLICATIONS**

- Tough 3D printing resins
- Impact resistant coatings for plastics
- Moisture-sensitive coatings or adhesives

**FEATURES**

- Excellent plastics adhesion
- Non-yellowing
- Excellent hydrophobicity

**FEATURES**

- Imparts toughness
- Glossy finish
- Provides abrasion resistance

BRC-4421 is a difunctional, hydrophobic urethane acrylate that can be formulated into chemical and temperature resistant coatings and resins. The material has low color and excellent adhesion to a wide variety of plastics. The material can be formulated into tough, impact resistant 3D printing resins with excellent flexibility. It's ultra-low water absorption makes this an excellent choice for moisture sensitive or hydrophobic applications.

**UNCURED PROPERTIES**

Property	Value
Viscosity, cP (60°C)	6,600
Pt-Co (APHA) Color	50
Refractive Index (25°C)	1.480
Density, g/cm <sup>3</sup> (25°C)	1.090

**CURED MECHANICAL PROPERTIES**

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psi**	3,000	3,300	6,200	3,500	4,500	1,300
Elongation, %**	120	30	3.1	11.0	6.8	120
Elastic Modulus, ksi**	90	210	290	150	160	25
Durometer Hardness	75D	81D	88D	79D	81D	75D
Water Absorption, % (24 hrs)	0.17	0.13	0.27	0.30	0.21	0.99
MEK Double Rubs (#)	72	25	>200	98	62	18

T<sub>g</sub> (DMA) = 48°C; Peak tan delta; cured with 2 phr of Irgacure<sup>®</sup> 184

\*\* Per ASTM D882

**ADHESION PROPERTIES**

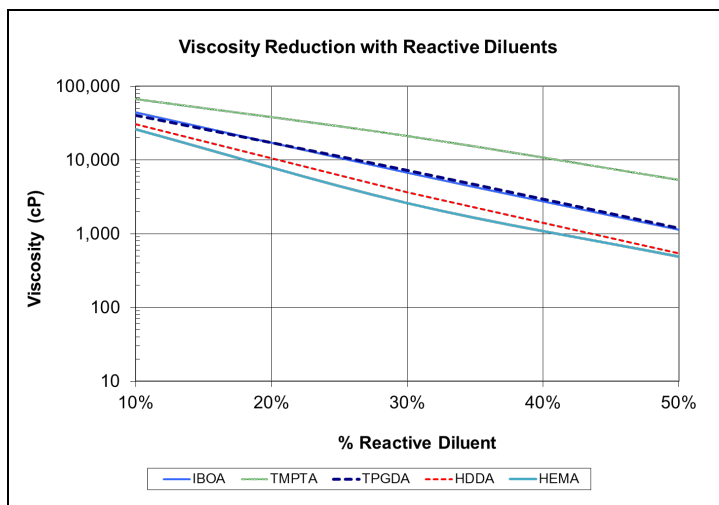
Substrate	I30	I50	TM50	TP50	H50	HE30
ABS	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓
Aluminum		✓✓				
Cold Rolled Steel	✓✓	✓✓		✓		
Glass		✓				
HDPE						
PET	✓✓✓	✓✓✓	✓✓✓	✓✓	✓	
PMMA	✓✓✓	✓✓✓		✓	✓	
Polycarbonate	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	
Polypropylene						
PVC	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	
Stainless Steel		✓✓				

✓ Recommended    ✓✓ Highly Recommended    ✓✓✓ Strongly Recommended

**TYPICAL FORMULATIONS**

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
BRC-4421	70	50	50	50	50	70
IBOA	30	50				
TMPTA			50			
TPGDA				50		
HDDA					50	
HEMA						30
Irgacure <sup>®</sup> 184	2	2	2	2	2	2
Viscosity, 25°C *	6,800	1,100	5,300	1,200	500	2,600

\* Brookfield – CAP 2000+ @ 25°C.



Brookfield – CAP 2000+ @ 25°C

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