

Bomar[®] BR-441BI20 Difunctional Aliphatic Polyester Urethane Acrylate

APPLICATIONS

- Plastic coatings
- Hard 3D printing resins
- Overprint varnishes

FEATURES

- Fast curing
- Glossy finish
- Low-yellowing

FEATURES

- Oil and chemical resistance
- Adhesion to plastics
- High tensile strength

BR-441BI20 is a fast-curing, high tensile strength, low molecular weight aliphatic polyester urethane acrylate with low color, high hardness, and excellent adhesion to plastic substrates. BR-441BI20 can be considered for use in high tensile strength overprint varnishes, high tensile strength 3D printing resins, and low-yellowing coatings.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (25°C)	73,000
Pt-Co (APHA) Color	30
Refractive Index (25°C)	1.490
Density, g/cm ³ (25°C)	1.13

CURED MECHANICAL PROPERTIES

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psi**	5,800	5,200	4,000	4,100	4,900	3,600
Elongation, %**	4.7	3.5	1.9	3.8	4.1	7.2
Elastic Modulus, ksi**	240	210	240	190	170	190
Durometer Hardness	87D	85D	91D	82D	85D	81D
Water Absorption, % (24 hrs)	0.27	0.20	0.30	0.36	0.24	1.68
MEK Double Rubs (#)	37	7	>200	195	>200	7
T _g (DMA) = 90°C; Peak tan delta; cured with 2 phr of Omnirad [®] 184						

** Per ASTM D882

ADHESION PROPERTIES

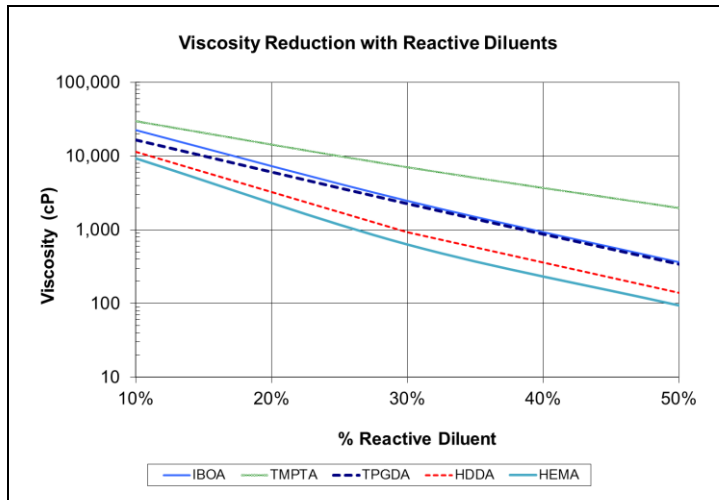
Substrate	I30	I50	TM50	TP50	H50	HE30
ABS	✓✓	✓✓	✓✓✓	✓✓	✓✓✓	✓✓
Aluminum						
Cold Rolled Steel						
Glass						
HDPE						
PET	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
PMMA						
Polycarbonate		✓✓✓		✓	✓✓	
Polypropylene						
PVC		✓✓	✓			
Stainless Steel						

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
BR-441BI20	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 *	2,500	400	2,000	300	140	600

* 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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