

Bomar™ BR-3042 Difunctional Aromatic Urethane Acrylate

APPLICATIONS

- UV Pressure Sensitive Adhesives
- Laminating Adhesives

FEATURES

- Enhances Adhesion
- Increases Flexibility

FEATURES

- Improves Solvent Resistance

Bomar™ BR-3042 is an aromatic polyether urethane diacrylate designed for UV adhesive applications. Cured films of BR-3042 and monofunctional monomers result in soft, highly elongative, tacky systems ideal for use in UV pressure sensitive adhesives (PSA), or UV-curable laminating adhesives.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (50°C)	20,000
Pt-Co (APHA) Color or Gardner Color	200
Refractive Index (25°C)	1.460
Density, g/cm ³ (25°C)	1.03

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TM50	TR50	H50
BR-3042	70	50	50	50	50
IBOA	30	50			
TMPTA			50		
TPGDA				50	
HDDA					50
Omnirad™ 481	2	2	2	2	2
Viscosity, 25°C *	12,500	2,235	7,990	2,375	1,300

* Brookfield – Small Samples Adapter

CURED MECHANICAL PROPERTIES

Property	I30	I50	TM50	TR50	H50
Tensile Strength, psi**	102	669	584	754	749
Elongation, % [^]	500	671	2.5	16	6.5
Elastic Modulus, ksi [^]	0.06	2.42	51.6	17.9	21.7
Durometer Hardness	24A	80A	63D	50D	49D

T_g (DMA) = -37°C; Peak tan delta; cured with 2 phr of Irgacure® 481

** Per ASTM D882

ADHESION PROPERTIES

Substrate	I30	I50	TM50	TR50	H50
Aluminum	✓	✓✓			
Cold Rolled Steel	✓	✓✓			
Glass	✓	✓✓			
HDPE		✓			
Polycarbonate		✓✓			
Stainless Steel	✓	✓✓			

Formulate BR-3042 with these monomers in flexible coating applications

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

FORMULATED PERFORMANCE AS A PSA

Test Formulation	Value	
Aluminum	50	
Cold Rolled Steel	40	
Glass	10	
HDPE	2	
Test Results	Value	Method
180° Peel, in/lb	4.64	PSTC 101
Loop Tack, in/in ²	1.69	ASTM D6195 ¹
Static Shear, hours	0.5	ASTM D646 ²

¹ Converted to English units

² 0.5 in x 0.5 in contact are, 30 minute dwell, 500 g load

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