

## Bomar<sup>®</sup> BR-543TF Difunctional Aliphatic Polyether Urethane Acrylate

**APPLICATIONS**

- Screen printing inks
- Tough 3D printing resins
- Plastic-bonding adhesives

**FEATURES**

- Enhanced flexibility
- Abrasion resistant
- Exhibits hydrolytic stability
- Provides oil and chemical resistance

**FEATURES**

- High clarity
- Excellent dynamic mechanical properties
- Provides excellent weatherability
- Tin-free

BR-543TF is a difunctional aliphatic polyether urethane acrylate that is tin-free. Films formulated with BR-543TF exhibit superior physical and weathering capabilities. BR-543TF may also be used to improve the flexibility, weathering, and adhesion characteristics of existing film and foil coatings. This product shows a high degree of crystallinity at room temperature.

**UNCURED PROPERTIES**

Property	Value
Viscosity, cP (60°C)	15,000
Pt-Co (APHA) Color	25
Refractive Index (25°C)	1.480
Density, g/cm <sup>3</sup> (25°C)	1.020

**CURED MECHANICAL PROPERTIES**

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psi**	700	2,300	3,800	1,900	2,100	1,000
Elongation, %**	100	170	5.2	13.5	9.5	80
Elastic Modulus, ksi**	1.3	9.3	120	50	50	7
Durometer Hardness	30D	46D	77D	63D	62D	40D
Water Absorption, % (24 hrs)	0.61	0.36	0.90	0.82	0.70	3.28
MEK Double Rubs (#)	38	20	>200	25	29	50

T<sub>g</sub> (DMA) = -59°C; Peak tan delta; cured with 2 phr of Irgacure<sup>®</sup> 184

\*\* Per ASTM D882

**ADHESION PROPERTIES**

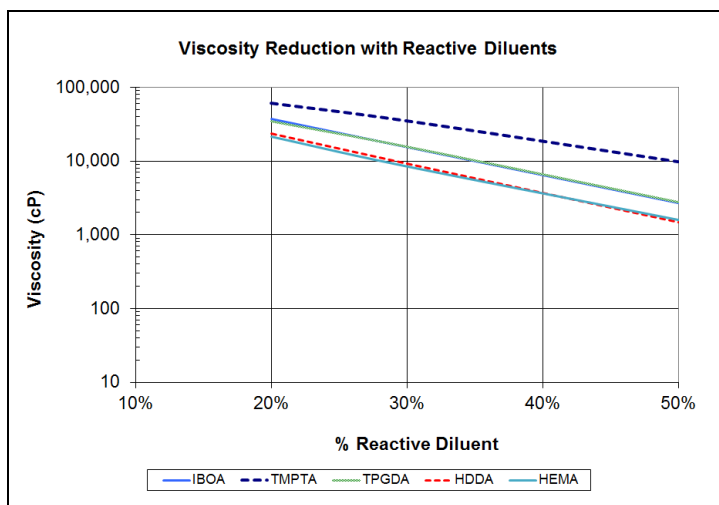
Substrate	I30	I50	TM50	TP50	H50	HE30
ABS			✓✓✓		✓✓	✓✓
Aluminum						
Cold Rolled Steel		✓				
Glass						
HDPE						
PET		✓✓	✓✓			
PMMA				✓		
Polycarbonate	✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓
PVC	✓	✓✓✓	✓✓	✓	✓✓✓	✓
Stainless Steel		✓✓				

✓ Recommended    ✓✓ Highly Recommended    ✓✓✓ Strongly Recommended

**TYPICAL FORMULATIONS**

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
BR-543TF	70	50	50	50	50	70
IBOA	30	50				
TMPTA			50			
TPGDA				50		
HDDA					50	
HEMA						30
Omnirad <sup>™</sup> 184	2	2	2	2	2	2
Viscosity, 25°C *	15,000	2,700	9,800	2,700	1,500	8,400

\* 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.

The data provided in this document are based on historical testing that Dymax performed under laboratory conditions as they existed at that time, and are for informational purposes only. The data are neither specifications nor guarantees of future performance in a particular application. Dymax does not guarantee that this product's properties are suitable for the user's intended purpose.

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