

Bomar[®] BR-543MB Polyether Urethane Methacrylate

APPLICATIONS

- Nail Coatings
- Optical Coatings
- Adhesion promoting co-oligomer

FEATURES

- High Tensile Strength
- Excellent Optical Clarity
- Exhibits Hydrolytic Stability
- Oil Resistant

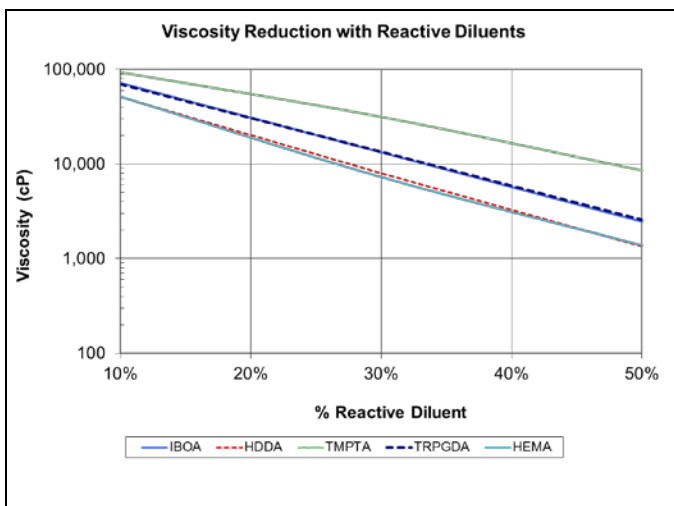
FEATURES

- Improves Impact Resistance
- Improves Adhesion
- Provides Weatherability
- Low Skin Sensitivity

Bomar[®] BR-543MB is a difunctional, aliphatic polyether urethane methacrylate. BR-543MB is an excellent candidate to consider for use in cosmetic applications. As a primary oligomer, BR-543MB offers excellent properties of adhesion and optical clarity. As a co-oligomer, BR-543MB can be used to improve an existing formulation's glass adhesion. This product is listed in the INCI directory to meet cosmetic regulatory guidelines, and has low skin sensitivity.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (60°C)	13,000
Pt-Co (APHA) Color	40
Refractive Index (25°C)	1.48
Density, g/cm ³ (25°C)	1.03



Brookfield – CAP 2000+ @ 25°C

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TP50	TM50	H50	HE30
BR-543MB	70	50	50	50	50	70
IBOA	30	50				
TMPTA				50		
TPGDA			50			
HDDA					50	
HEMA						30
Omnirad [™] 481	2	2	2	2	2	2
Viscosity, 25°C *	13,275	2,456	2,559	8,512	1,350	7275

* Brookfield – CAP 2000+ @ 25°C

CURED MECHANICAL PROPERTIES

Property	I30	I50	TP50	TM50	H50	HE30
Tensile Strength, psi**	697	1,757	1,095	2,262	1,368	987
Elongation, %**	51	41	10	3.4	5.4	141
Elastic Modulus, ksi**	1.1	5.8	31	98	47	1.9
Durometer Hardness	74A	35D	52D	77D	62D	45D
Water Absorption, % (24 hrs)	0.77	0.44	0.97	1.06	0.80	3.72
MEK Double Rubs (#)	12	18	23	105	65	33
T _g (DMA) = -56°C; Peak tan delta; cured with 2 phr of Irgacure [®] 481						

** Per ASTM D882

ADHESION PROPERTIES

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

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

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Dymax Corporation
860.482.1010 | info@dymax.com | www.dymax.com

Dymax Europe GmbH
+49 (0) 611.962.7900 | info_de@dymax.com | www.dymax.de

Dymax Engineering Adhesives Ireland Ltd.
+353.1.231.4696 | info_ie@dymax.com | www.dymax.ie

Dymax Oligomers & Coatings
860.626.7006 | info_oc@dymax.com | www.dymax-oc.com

Dymax UV Adhesives & Equipment (Shanghai) Co. Ltd.
+86.21.37285759 | dymaxasia@dymax.com | www.dymax.com.cn

Dymax UV Adhesives & Equipment (Shenzhen) Co. Ltd.
+86.755.83485759 | dymaxasia@dymax.com | www.dymax.com.cn

Dymax Asia (H.K.) Limited
+852.2460.7038 | dymaxasia@dymax.com | www.dymax.com.cn

Dymax Asia Pacific Pte. Ltd.
+65.6752.2887 | info_ap@dymax.com | www.dymax-ap.com

Dymax Korea LLC
+82.2.784.3434 | info_kr@dymax.com | www.dymax.com/kr