Bomar® BR-541MB
Polyether Urethane Methacrylate

APPLICATIONS

- Nail Coatings
- Optically Clear Coatings
- Scratch Resistant Coatings
- Hard, Glossy Coatings

FEATURES

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

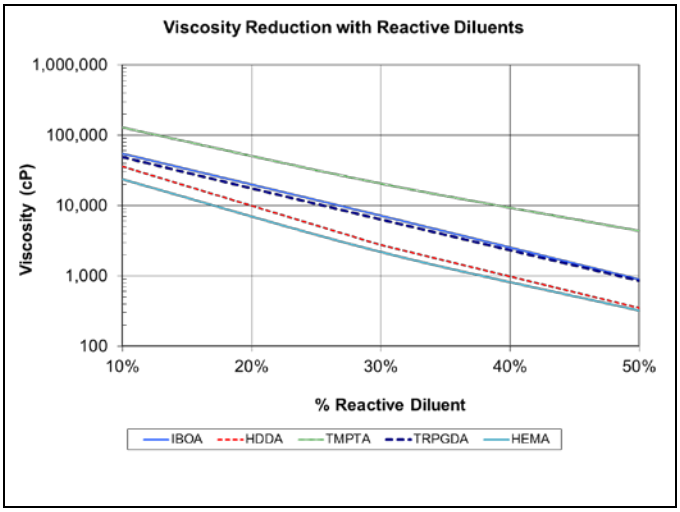
FEATURES

- Low Skin Sensitivity
- Improved Adhesion
- Provide Weatherability

BOMAR® BR-541MB is a difunctional, aliphatic polyether urethane methacrylate. BR-541MB is used for its desirable balance of toughness and flexibility and its ability to adhere to a variety of substrates. This oligomer is an excellent candidate to consider for use in impact-resistant coatings on various substrates when used with BR-543MB. This material has low skin sensitivity, and is INCI registered for compliance in cosmetic applications.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (60 °C)	6,800
Pt-Co (APHA) Color	20
Refractive Index (25 °C)	1.49
Density, g/cm^3 (25°C)	1.07



Brookfield – CAP 2000+ @ 25°C

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TP50	TM50	H50	HE30
BR-541MB	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 *	7,181	889	855	4,375	350	2,182

* Brookfield – CAP 2000+ @ 25°C

CURED MECHANICAL PROPERTIES

Property	I30	I50	TP50	TM50	H50	HE30
Tensile Strength, psi**	2,684	2,503	2,574	4,506	3,139	2,239
Elongation, %**	63	25	10	3.4	5.7	49
Elastic Modulus, ksi**	125	176	114	208	121	113
Durometer Hardness	80D	81D	77D	89D	80D	80D
Water Absorption, % (24 hrs)	0.48	0.33	0.67	0.58	0.48	2.04
MEK Double Rubs (#)	37	45	40	>200	110	16
T_g (DMA) = 74°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 Oligomers & Coatings
860.626.7006 | info_oc@dymax.com | www.dymax-oc.com

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

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

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

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

Dymax Engineering Adhesives Ireland Ltd.
+353.1.231 4696 | info_ie@dymax.com | www.dymax.ie

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

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