

## Bomar<sup>®</sup> BR-551ME Polyether Urethane Methacrylate

**APPLICATIONS**

- LED curing gel polish

**FEATURES**

- Fast acetone soak-off
- Very low viscosity

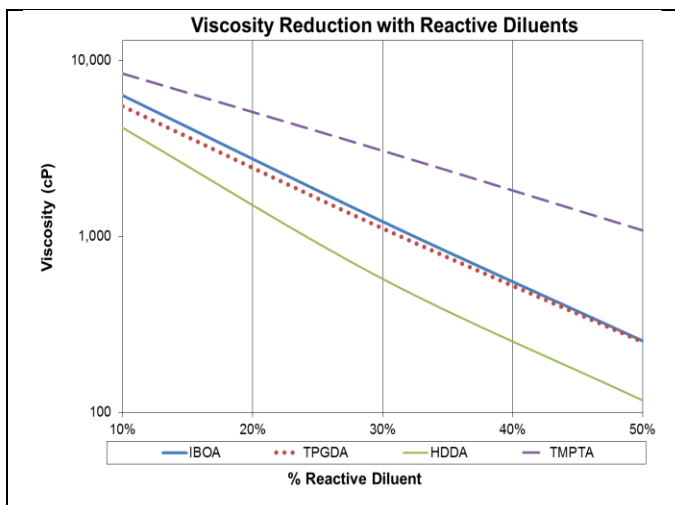
**FEATURES**

- Low APHA color
- High gloss
- Low MeHQ levels

Bomar<sup>®</sup> BR-551ME is an oligomer that provides excellent acetone removability when used in gel polish applications. Low heat generation occurs during cure with UV/LED lamps that are typically used in nail gel polish applications. The resultant coating also has high gloss, and has low APHA color impact. Furthermore, this oligomer was designed to meet regulatory expectations for salon applications in Europe.

**UNCURED PROPERTIES**

Property	Value
Viscosity, cP ( 25°C)	16,800
Pt-Co (APHA) Color or Gardner Color	47 APHA
Refractive Index (25°C)	1.48
Density, g/cm <sup>3</sup> (25°C)	1.06



Brookfield – CAP 2000+ @ 25°C

**TYPICAL FORMULATIONS**

Test Formulation Name	I30	I50	TP50	TM50	H50	HE30
BR-551ME	70	50	50	50	50	70
IBOA	30	50				
TMPTA				50		
TPGDA			50			
HDDA					50	
HEMA						30
Irgacure <sup>®</sup> 184	2	2	2	2	2	2
Viscosity, 25°C *	1,215	255	251	1,084	117	532

\* Brookfield – CAP 2000+ @ 25°C

**CURED MECHANICAL PROPERTIES**

Property	I30	I50	TP50	TM50	H50	HE30
Tensile Strength, psi**	1,215	1,635	1,719	3,528	2,547	1,053
Elongation, %**	59.8	10.6	9.2	2.9	7.9	6.8
Elastic Modulus, ksi**	41	107	76	185	59	43
Durometer Hardness	55D	73D	68D	86D	75D	67D
Water Absorption, % (24 hrs)	0.36	0.22	0.48	0.38	0.31	1.61
MEK Double Rubs (#)	5	4	16	>200	25	10

T<sub>g</sub> (DMA) = 53°C; Peak tan delta; cured with 2 phr of Irgacure<sup>®</sup> 184

\*\* Per ASTM D882

**ADHESION PROPERTIES**

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

✓ Recommended    ✓✓ Highly Recommended    ✓✓✓ Strongly Recommended

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**Dymax Corporation**  
860.482.1010 | info@dymax.com | [www.dymax.com](http://www.dymax.com)

**Dymax Europe GmbH**  
+49 (0) 611.962.7900 | info\_de@dymax.com | [www.dymax.de](http://www.dymax.de)

**Dymax Engineering Adhesives Ireland Ltd.**  
+353.1.231.4696 | info\_ie@dymax.com | [www.dymax.ie](http://www.dymax.ie)

**Dymax Oligomers & Coatings**  
860.626.7006 | info\_oc@dymax.com | [www.dymax-oc.com](http://www.dymax-oc.com)

**Dymax UV Adhesives & Equipment (Shanghai) Co. Ltd.**  
+86.21.37285759 | dymaxasia@dymax.com | [www.dymax.com.cn](http://www.dymax.com.cn)

**Dymax UV Adhesives & Equipment (Shenzhen) Co. Ltd.**  
+86.755.83485759 | dymaxasia@dymax.com | [www.dymax.com.cn](http://www.dymax.com.cn)

**Dymax Asia (H.K.) Limited**  
+852.2460.7038 | dymaxasia@dymax.com | [www.dymax.com.cn](http://www.dymax.com.cn)

**Dymax Asia Pacific Pte. Ltd.**  
+65.6752.2887 | info\_ap@dymax.com | [www.dymax-ap.com](http://www.dymax-ap.com)

**Dymax Korea LLC**  
+82.2.784.3434 | info\_kr@dymax.com | [www.dymax.com/kr](http://www.dymax.com/kr)