

Bomar[®] BR-551M Polyether Urethane Methacrylate

APPLICATIONS

- LED curing gel polish

FEATURES

- Fast acetone soak-off
- Very low viscosity

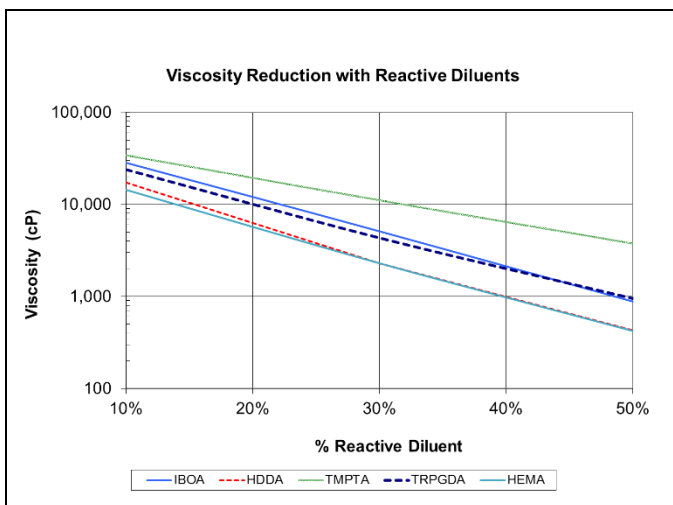
FEATURES

- Low APHA color
- High gloss
- Low MeHQ levels

Bomar[®] BR-551M 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)	65,000
Pt-Co (APHA) Color or Gardner Color	<50
Refractive Index (25°C)	1.48
Density, g/cm ³ (25°C)	1.1



Brookfield – CAP 2000+ @ 25°C

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
BR-551M	70	50	50	50	50	70
IBOA	30	50				
TMPTA			50			
TPGDA				50		
HDDA					50	
HEMA						30
Irgacure [®] 184	2	2	2	2	2	2
Viscosity, 25°C *	5,100	881	3,775	956	431	2,294

* Brookfield – CAP 2000+ @ 25°C

CURED MECHANICAL PROPERTIES

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psi**	1300	2000	2900	1400	1600	950
Elongation, %**	74	98	3	9	5	70
Elastic Modulus, ksi**	22	64	138	55	63	24
Durometer Hardness	55D	66D	84D	63D	69D	53D
Water Absorption, % (24 hrs)	0.4	0.23	0.48	0.54	0.4	1.98
MEK Double Rubs (#)	18	17	98	16	147	14

 T_g (DMA) = 53°C; Peak tan delta; cured with 2 phr of Irgacure[®] 184

** Per ASTM D882

ADHESION PROPERTIES

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

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

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