

Bomar[®] BR-741MD1 Difunctional Aliphatic Polyester Urethane Methacrylate

APPLICATIONS

- UV/LED nail gels
- Vacuum metallized coatings
- High hardness coatings

FEATURES

- High tensile strength
- Excellent surface hardness
- High gloss

FEATURES

- Low MeHQ levels
- Non-yellowing
- Low skin irritation

BR-741MD1 is an aliphatic, difunctional polyester urethane acrylate offering excellent adhesion and flexibility. While not limited to these applications, BR-741MD1 is an effective choice in optically clear coatings and inks for plastics and metals. This oligomer is also perfect for UV & LED nail gel coatings because this material has low skin sensitivity and is INCI listed.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (60°C)	2,000
Pt-Co (APHA) Color	30
Refractive Index (25°C)	1.480
Density, g/cm ³ (25°C)	1.100

CURED MECHANICAL PROPERTIES

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psj**	9,600	8,800	7,000	8,400	7,700	7,800
Elongation, %**	4.0	3.5	2.3	4.5	3.0	3.8
Elastic Modulus, ksi**	410	370	440	380	360	370
Durometer Hardness	90D	91D	94D	88D	89D	92D
Water Absorption, % (24 hrs)	0.21	0.16	0.38	0.40	0.31	0.60
MEK Double Rubs (#)	>200	154	>200	>200	>200	>200
T _g (DMA) = 111°C; Peak tan delta; cured with 2 phr of Irgacure [®] 184						

** Per ASTM D882

ADHESION PROPERTIES

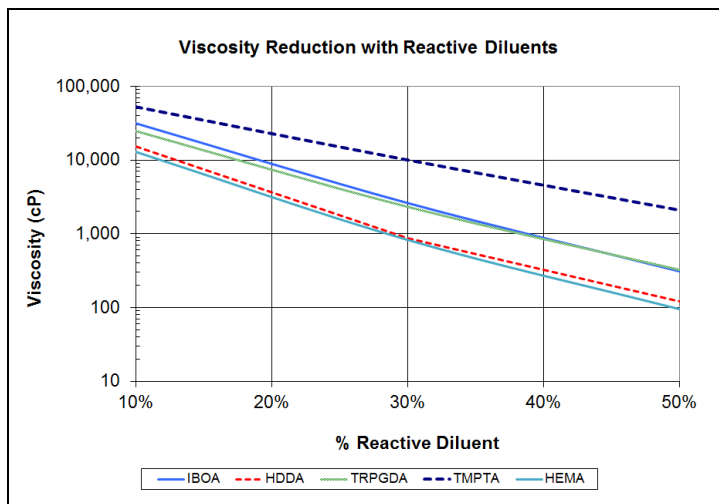
Substrate	I30	I50	TM50	TP50	H50	HE30
ABS			✓✓✓		✓✓✓	✓✓✓
Aluminum						
Cold Rolled Steel	✓	✓		✓✓	✓	✓
Glass						✓✓✓
HDPE						
PET	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
PMMA	✓	✓	✓✓✓	✓	✓	
Polycarbonate	✓	✓	✓✓✓	✓	✓✓✓	
Polypropylene						
PVC	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	
Stainless Steel		✓✓		✓✓✓		✓✓

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
BR-741MD1	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 *	2,600	300	2,100	300	120	800

* Brookfield – CAP 2000+ @ 25°C.



Brookfield – CAP 2000+ @ 25°C

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