

Bomar[®] XR-741MS Difunctional Aliphatic Polyester Urethane Methacrylate

APPLICATIONS

- Hard gel nail coatings
- High hardness coatings
- Dental resins

FEATURES

- Methacrylate functionality for low skin sensitivity
- Glossy finish
- Excellent non-yellowing

FEATURES

- High tensile strength and modulus
- Excellent adhesion to plastic substrates

XR-741MS, a low molecular weight, difunctional, aliphatic polyester urethane methacrylate, can be effectively formulated for adhesion to steel, aluminum, and various plastics. The resulting hard, tough film makes an effective, non-yellowing protective coating. This material has low skin sensitivity for dental and cosmetic applications.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (60°C)	52,000
Pt-Co (APHA) Color	30
Refractive Index (25°C)	1.500
Density, g/cm ³ (25°C)	1.24

CURED MECHANICAL PROPERTIES

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psi**	8,100	8,100	8,800	6,500	6,600	6,200
Elongation, %**	4.5	3.5	3.5	6.5	4.5	7
Elastic Modulus, ksi**	320	300	340	250	220	250
Durometer Hardness	89D	88D	91D	86D	86D	90D
Water Absorption, % (24 hrs)	0.21	0.18	0.33	0.38	0.31	0.79
MEK Double Rubs (#)	145	13	>200	>200	>200	>200

T_g (DMA) = 107°C; Peak tan delta; cured with 2 phr of Omnirad[®] 184

** Per ASTM D882

ADHESION PROPERTIES

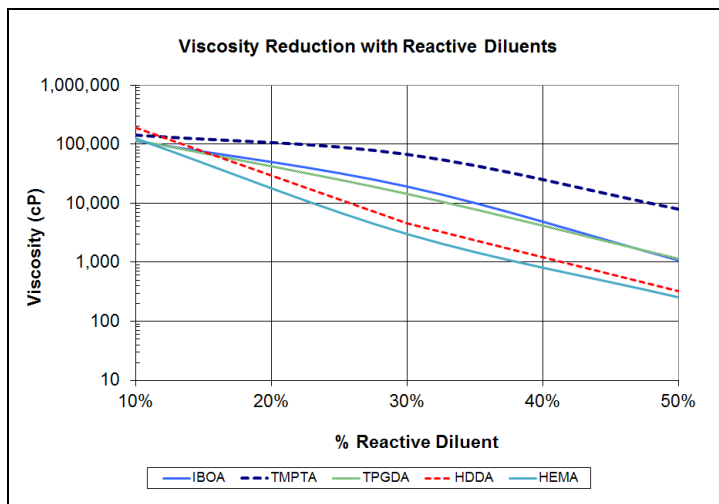
Substrate	I30	I50	TM50	TP50	H50	HE30
ABS	✓✓✓	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Aluminum						
Cold Rolled Steel	✓			✓		✓✓✓
Glass				✓		✓
HDPE						
PET	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
PMMA	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓
Polycarbonate	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓
Polypropylene					✓	
PVC	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓
Stainless Steel	✓	✓✓		✓		✓✓✓

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
XR-741MS	70	50	50	50	50	70
IBOA	30	50				
TMPTA			50			
TPGDA				50		
HDDA					50	
HEMA						30
Omnirad [™] 184	2	2	2	2	2	2
Viscosity, 25°C *	19,000	1,000	8,000	1,100	300	3,000

* Brookfield – CAP 2000+ @ 25°C.



Brookfield – CAP 2000+ @ 25°C

GENERAL INFORMATION

This product is intended for industrial use only. Keep out of the reach of children. Avoid breathing vapors. Avoid contact with skin, eyes, and clothing. Wear impervious gloves. Repeated or continuous skin contact with uncured material may cause irritation. Remove material from skin with soap and water. Never use organic solvents to remove material from skin and eyes. For more information on the safe handling of this material, please refer to the I Safety Data Sheet before use.

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