Bomar® XDT-1018
18 Functional Thioether Dendritic Acrylate

APPLICATIONS

- Flexible hard coatings
- Overprint varnishes
- Printing inks

FEATURES

- Enhances chemical resistance
- Abrasion resistance
- Rapid cure
- Low oxygen inhibition

FEATURES

- Relatively low viscosity for highly reactive oligomer
- Good flexibility with high scratch resistance
- Tin free
- INCI registered

XDT-1018 is a dendritic acrylate with an average functionality of 18. The hyper-branched structure of XDT-1018 imparts a unique combination of low diluted viscosity with unmatched chemical and thermal resistance. XDT-1018 is ideal in applications where withstanding exposure to the harshest conditions is paramount. It performs excellently in high-temperature applications and thermogravimetric analysis indicates that this oligomer does not decompose until reaching 350 °C. XDT-1018 has been INCI registered for use in cosmetic applications.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (25°C)	57,000
Pt-Co (APHA) Color	32
Refractive Index (25°C)	1.510
Density, g/cm^3 (25°C)	1.210

CURED MECHANICAL PROPERTIES

Property	I30	I50*	TM50	TP50	H50	HE30
Tensile Strength, psi**	4,000		3,200	3,600	2,600	2,000
Elongation, %**	6.7		1.3	4.8	1.7	17.0
Elastic Modulus, ksi**	160		250	140	170	40
Durometer Hardness	84D		88D	82D	80D	81D
Water Absorption, % (24 hrs)	0.19		0.36	0.38	0.29	1.29
MEK Double Rubs (#)	>200		>200	>200	>200	>200

T_g (DMA) = 54°C; Peak tan delta; cured with 2 phr of Irgacure® 184
*I50 was cloudy and not tested due to the incompatibility

** Per ASTM D882

ADHESION PROPERTIES

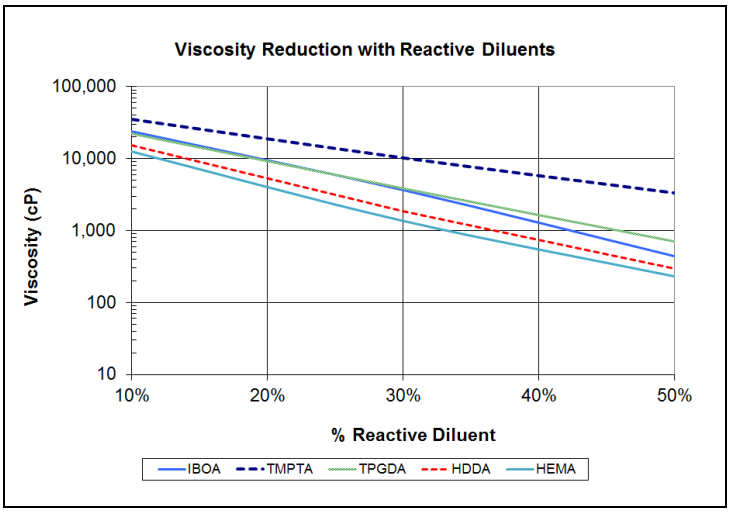
Substrate	I30	I50*	TM50	TP50	H50	HE30
ABS	✓✓✓		✓✓✓	✓✓✓	✓✓✓	✓✓✓
Aluminum	✓					✓
Cold Rolled Steel	✓			✓✓		✓✓✓
Glass						✓✓✓
HDPE						
PET	✓✓✓		✓✓✓	✓✓✓	✓✓✓	✓✓✓
PMMA	✓		✓✓✓	✓✓✓	✓✓✓	✓✓✓
Polycarbonate	✓✓✓		✓✓✓	✓✓✓	✓✓✓	✓
Polypropylene						✓✓✓
PVC	✓✓✓		✓✓✓		✓✓✓	✓✓
Stainless Steel	✓			✓		✓

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50*	TM50	TP50	H50	HE30
XDT-1018	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 *	3,600		3,400	700	300	1,400

* Brookfield – CAP 2000+ @ 25°C.



Brookfield – CAP 2000+ @ 25°C

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