



Wood
Coating
—
Product
guide



We bring it all together.



Wood Coating

Product guide resin



UV/EB RAW MATERIAL AND TECHNICAL SOLUTION PROVIDER

IGM Resins is the leading global provider of energy curable raw material solutions to a wide variety of industries such as graphic arts, industrial coatings, adhesives and 3D printing. The combination of our global presence, unique market driven and customer focused approach, technical and regulatory support, and our comprehensive portfolio of products covering photoinitiators, monomers, oligomers and additives, is the cornerstone of our success.

Our dedication to energy curing technology and the markets we serve is emphasized by the development of next generation products for innovative integrated solutions, and ongoing investment

into state-of-the-art manufacturing capabilities.

HOW TO GET MORE FROM US

This leaflet is dedicated for lacquer and paint manufacturer in the wood industry. According to environmental and sustainability concerns, wood is a popular substrate in the coating industry. UV curing technology will contribute to the sustainability as it is free of any solvents.

UV light curing for wood shows several advantages such as:

- High quality varnishes (Abrasion and solvent resistance, high hardness, ...).
- Fast curing.
- Shorter and faster production line.



- High quality appearance: gloss, matt or textured finishes.
 - Little or no use of solvent.
- Among our products, you will be able to formulate your varnish according to standard performances: flexibility, abrasion, chemical resistance and non-yellowing.

- Abrasion resistance: Taber Abraser and CS17 wheel according to ISO 7784-2.
- Chemical resistance: Surface resistance evaluation of the coating according to ISO 4211.
- Yellowing resistance: UV light and humidity cycle exposure with a Q-UV equipment according to ISO 4892.

EXPLANATIONS

The technical characteristics were evaluated as mentioned below:

- **Functionality:** Average double bond per molecule available for cross-linking for UV curing.
- **Tg:** Glass transition temperature in degree Celsius.
- **Cure rate:** Reactivity control of the resin done at different UV light dosage.
- **Flexibility:** Cylindrical mandrel according to method ISO 1519.

To meet these challenging requirements, IGM Resins offers different solutions. In this leaflet you will find information about our product portfolio.

For more details, contact your local sales representative or send us an email to sales@igmresins.com for Europe and Asia and ussales@igmresins.com for America.

Product	Chemical Identity	Functionality	Viscosity mPa.s at 25°C	Tg (°C)	Cure rate	Flexibility	Abrasion resistance	Chemical resistance	Yellowing resistance	Product attributes	Furniture Coating		Parquet Flooring		EU Reach *	USA TSCA *	China IECSC *	Japan ENCS *
											Basecoat	Topcoat	Pigmented systems	Primer				

URETHANE ACRYLATES

	Photomer 6019	Aliphatic urethane acrylate	3	3 250 (60°C)	51	•••	••	••	••••	••••	Hardness , chemical resistance		•				•	•	•	•
	Photomer 6184	Aliphatic urethane acrylate	3	58 000	53	•••	•	••••	••••	••••	Abrasion resistance, reactivity		•				•	•	•	•
	Photomer 6210	Aliphatic urethane acrylate	2	12 000	32	•••	••••	••••	••	•••	Abrasion resistance, flexibility	•	•		•	•	•	•	•	•
Tin Free	Photomer 6578	Aromatic urethane acrylate	4	6 000	40	•••	••••	•••	•••	•••	Low viscosity, abrasion resistance		•	•		•	•	•	•	•
	Photomer 6582	Aromatic urethane acrylate	2	180 000	na	•••	••••	••••	••••	••••	Flexibility, high reactivity	•		•	•	•		•	•	•
Tin Free	Photomer 6639	Aliphatic urethane acrylate	3	7 500	-40	•••	••••	•••	•••	••	Flexibility, reactivity	•			•			•	•	
	Photomer 6690	Aliphatic urethane acrylate	6	2 000 (60°C)	na	••••	•	••••	••••	••••	Hardness and high abrasion resistance		•				•	•		•
Tin Free	Photomer 6692	Aliphatic urethane acrylate, petia free	6	5500	na	•••	••	••••	••••	•••	Excellent abrasion resistance, good hardness, good chemical and water resistant		•				•	•	•	•
	Photomer 6720	Aromatic urethane acrylate	6	28 500	49	••••	•	•••	••••	••	High chemical and scratch resistance		•			•	•	•	•	•
Tin Free	Photomer Aqua 6901	Aliphatic urethane acrylate	2	50 000 (40°C)	na	•••	••	•••	•••	••	Good reactivity and abrasion resistance, solubility in water		•	•		•	•	•	•	•
	Photomer Aqua 6902	Water dilutable urethane acrylate	2	35000	na	••	••	••	••	•••	Good weatherability, good toughness, dilutable		•		•		•	•	•	•
	Photomer Aqua 6903	Aliphatic urethane acrylate	6	30 000	na	••	•••	••	••	••	Good flexibility and solubility in water	•			•	•		•	•	•

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EPOXY ACRYLATES

Photomer 3016	Bisphenol A epoxy diacrylate	2	5 500 (60°C)	72	••••	•	••	••••	•	Scratch and chemical resistance	•	×		•	•	•	•	•	•
Photomer 3016-20H	Bisphenol A epoxy diacrylate diluted with 20% HDDA	2	10 000	na	••	•	••	••••	•	Gloss and chemical resistance	•	•		•	•	•	•	•	•
Photomer 3319	Aliphatic epoxy acrylate	2	1 000	26	•••	••	••	••••	•	Excellent reactivity and chemical resistance		•		•	•	•			•
Photomer 3701	Cresol novolac epoxy acrylate in 40% TMPTA	3	10 000	67	••••	•	•••	••••	•	Hardness, heat resistance		•			•	•			•

BPA Free

BPA Free

Product	Chemical Identity	Functionality	Viscosity mPa.s at 25°C	Cure rate	Flexibility	Chemical resistance	Yellowing resistance	Product attributes	EU Reach *	USA TSCA *	China IECSC *	Japan ENCS *
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ACRYLATED AMINES

Photomer 4250	Acrylated amine synergist	-	350	•••	•			Cure speed, high reactivity, oxygen inhibitor	•	•	•	
Photomer 4771	Acrylated amine synergist	2	700	•••	•		•••	Cure speed, non-yellowing	•	•	•	•
Photomer 4775	Acrylated amine synergist	2	3 200	•••	•		•••	Cure speed, non-yellowing	•	•	•	•
Photomer 4967	Acrylated amine synergist	1	23	•••	•	•••	•	Cure speed, high reactivity, chemical resistance, oxygen inhibitor	•	•	•	
Photomer 5006	Acrylated amine synergist	1	73	•••	•	•••	•	Cure speed, high reactivity, chemical resistance, oxygen inhibitor	•	•	•	

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SPECIALTY ACRYLATES

Photomer 4071	MPDDA	2	8,5	50	•••	•	••	•••	•••	low odour, adhesion, high solvency & cutting power	•	•	•	•	•	•	•	•
Photomer 4172	PPTTA	4	150	36	•••	•	••	••	••	High reactivity, dispersive properties, flexibility, low solvent content	•	•	•	•	•	•	•	•
Photomer 4399	DPHA	6	13000	na	•••	•	•••	•••	••	High reactivity, hardness and scratch resistant	•	•	•	•	•	•	•	•
Photomer 4600	DPHA	6	6000	na	•••	•	•••	•••	••	High reactivity, hardness, abrasion and scratch resistant	•	•	•	•	•	•	•	•
Photomer 4666	DPHA	6	5500	94	•••	•	•••	•••	••	High reactivity, hardness and scratch resistant	•	•	•	•	•	•	•	•
Photomer 5010	Matting resin	2	Gel	na	••	•••	••	••	••	Self-matting, low gloss	•	•	•	•	•	•	•	•
Photomer 5050	Polyether acrylate	6	2 500	na	••••	•••	••	•••	••••	High reactivity, mechanical resistance	•	•	•	•	•	•	•	•
Photomer 5426	Polyester acrylate	4	30 000	na	••	•••	•••	•••	••	Excellent abrasion and chemical resistance	•	•	•	•	•	•	•	•
Photomer 5429	Polyester acrylate	4	400	45	••	•••	•••	••••	••••	Low viscosity, chemical resistance, hardness	•	•	•	•	•	•	•	•
Photomer 5437	Polyester acrylate	4	10 000	na	•••	••••	••••	•••	••	Flexibility, abrasion and scratch resistance	•	•	•	•	•	•	•	•
Photomer 5662	Amine modified polyether acrylate	4	3 000	na	••	••••	••••	•••	••	Flexibility, abrasion resistance	•	•	•	•	•	•	•	•
Photomer 5930	Amine modified polyether acrylate	4	500	na	•••	••	••	••••	•••	High reactivity, chemical resistance	•	•	•	•	•	•	•	•
Photomer 9144	Unsaturated polyester acrylate in DPGDA	2	12 500	na	••	•••	•••	•••	••	Adhesion , pigment wetting	•	•	•	•	•	•	•	•
Photomer 9145	Unsaturated Polyester resin diluted in DPGDA	2	12 500	na	••	•••	•••	•••	••	Adhesion, pigment wetting	•	•	•	•	•	•	•	•

Product	Chemistru	CAS Number	Melting point °C	UV-Absorption nm	LED cure	Pigmented system	Clear system	Waterbased system	IKEA	EU Reach *	USA TSCA *	China IECSC *	Japan ENCS *
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PHOTOINITIATORS

Esacure 3644	Type II	2243703-91-3	68-71	325, 375	•••	•••	•••		se	•	•x	•	
Esacure DP 250	Type I & II	Proprietary	Liquid **	245, 260, 381	••	••	•••	••••	N	•	•	•	
Esacure KIP 75LT	Type I	163702-01-0 + 42978-66-5	Liquid **	260		•	•••	••	N	•	•	•	
Esacure KIP 150	Type I	163702-01-0	Viscous Liquid **	260		•	•••	••	Y	•	•	•	
Esacure KIP 160	Type I	718668-15-0	> 96	275		•••	•••	•	Y	•	S	•	•
Esacure KIP 100F	Type I	163702-01-0 + 7473-98-5	Liquid **	260		•	•••	••	Y	•	•	•	
Esacure KTO 46	Type II	-	Liquid **	245, 260, 380	••	••	•••	••	N		•	•	
Omnirad 127	Type I	474510-57-1	45–50	243, 332	•	••	•••	•	Y	•	S	•	•
Omnirad 184	Type I	947-19-3	44–50	243, 331	•	•	•••	•••	Y	•	•	•	•
Omnirad 500	Type II	119-61-9 + 947-19-3	Liquid **	248, 338		••	•••	••	N	•	•	•	•
Omnirad 754	Type I	-	-22	260, 340			•••		Y	•	•	•	•
Omnirad 819DW	Type I	-	Liquid **	237, 275, 380	•••	•••	••	••••	N		•	•	
Omnirad 1173	Type I	7473-98-5	Liquid **	244, 330	•	•	•••	•••	Y	•	•	•	•
Onirad 2959	Type I	106797-53-9	86–90	274, 330	•	••	•••	•••	Y	•	•	•	•
Omnirad BDK	Type I	24650-42-8	64–67	252, 325		••			Y	•	•	•	•
Omnirad MBF	Type II	15206-55-0	Liquid **	255, 325		•	•••	•••	Y	•	•	•	•
Omnirad 4 MBZ	Type II	134-84-9	54–58			••	•••	•	N	•	•	•	•
Omnirad TPO	Type I	75980-60-8	91–94	275, 379	•••	••	••	•	N	•	•	•	•
Omnipol ASA	Amine synergist	71512-90-8	Liquid **	230, 325	•••	•••	••		N	•	•		
Omnipol TP	Polymeric Type I	Proprietary	Liquid **	360, 395	•••	••	•••		se	•	•	•	

*: For further registration information, please contact your local sales representative

** : At room temperature

IKEA Compliant according to IOS –MAT-0066 version 11 - Valid: 1st January 2019 - according to Annex VI in the CLP regulation

S: SNUR for this product

se: suitable for evaluation

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Our technical team is here to offer you support and advice to help you meet your goals. For our full product range, please refer to the UV/EB Radcure Product Guide.

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