



ENERGY CURING

PRODUCT GUIDE 2023



RAHN

Your partner for excellence



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This guide includes our most successfully used and commercially fully supported products. If your requirements cannot be met with any of these products, please contact us directly to help you find a solution.

Worldwide support for your energy curing systems

Energy Curing – a diverse range of applications

What is the best way to get ink to adhere to laminated paper? How do objects created with a 3D printer keep their shape, and what kind of adhesive is required for immediate curing? You can overcome these and countless other challenges using ultraviolet and electron beam curing techniques. This Product Guide contains details of our main commercially available raw materials – additives, oligomers, reactive diluents, photoinitiators and other specialty chemicals. These can be used for an extremely wide range of applications – in inks, coatings, adhesives, medical products and rapid prototyping.

Can't find what you're looking for?

Our Product Guide lists the key features of our main products. If you can't find the specific feature you require, please get in touch with our experts. We will be happy to discuss your particular needs and find an effective solution. We run our own laboratories in Switzerland, United States and China. This has enabled RAHN-Energy Curing to develop hundreds of starting formulations during the last thirty years and more. Each of them was inspired by a particular industry challenge.

RAHN: Swiss expertise

all over the world



Regulatory directives and requirements are constantly changing. This makes it increasingly costly and complicated to register new products (e.g. REACH). Our competence center helps you maintain an overview of regulations worldwide. Our specialists will be happy to provide you with one-to-one advice on health & safety issues and registering products internationally.

Your partner, not just any supplier

We have been researching, producing and supplying customized specialty chemicals for more than thirty years. Over time, we have nurtured long-standing partnerships with our customers. This kind of collaboration is the only way to find the optimum answer to the challenges that you face.

A Swiss family-run company – in its third generation

RAHN is an independent Swiss family-run company. It is now in the hands of the third generation. Thanks to our financial independence, we are able to make swift business decisions and entertain long-term commitments.

Profound experience in the sector

Our crucial success factors are the specialist skills and expert knowledge of our staff. They are able to advance day by day in our open and transparent culture. We have an extremely loyal team of employees, so you will continue to deal with the people you know as time passes by.

Be inspired

Our customers create amazing results with our raw materials for digital inkjet printing – no matter whether gloss, matte, or even 3D effects. What's more, they can be used to print on almost any material. Whether, paper, glass, wood, plastic or metal, we have the right products to meet all sorts of needs and technical requirements.

Eye-catching food packaging

Food packaging jostles for customers' attention on supermarket shelves and in the aisles. Our specially developed products with their high molecular weight ensure that the inks contain no undesirable substances that might penetrate the packaging. This keeps the food safe and lets the advantages of radiation-curing ink systems shine out for all to see.

Shape-retaining workpieces created with 3D printing

Our customers not only use our products to create 3D effects, but also generate robust workpieces with their 3D printers. Our raw materials reduce shrinkage and ensure objects match our customers' precise specifications.

Tap into our expertise

Would you like to know more? Our Product Flashes give details on specific products or applications whilst our Lab Reports contain the latest findings in our laboratories – e.g. for 3D printing, LED and digital or inkjet printing. You can find out more at www.rahn-group.com/news.

Use our laboratories

Would you like to work together with us to find out what works and to produce the optimum result for your project? Our laboratories are at your disposal – for training your staff as well, should you wish.

Expertise boosts customer confidence

Specializing in UV and electron beam technology, our Energy Curing experts have an international remit. We want to be more than a supplier for our customers. Our goal is to be a reliable partner to help drive their business forward and generate measurable benefits.

Ana Patricia Rahn Erden
Company Owner



"It has always been important for my father Hans Konrad Rahn, to create an interesting work environment and grant the employees considerable freedom to achieve the company's goals. It was one of my aims to follow his thoughts in the third generation."

Ethric Huang
Head of Application Laboratory RAHN China



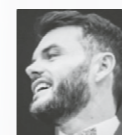
"RAHN-products are designed and developed in our three laboratories (Switzerland, USA and China). In addition, we have conducted extensive application research for these products in various fields to ensure that precise solutions are offered to customers."

Sue Howell
Customer Service RAHN USA



"Customer service is our main priority, we work quickly and efficiently to ensure that each goal is met with every customer order."

Thibaud Pagès
Technical Sales Manager, France / Benelux



"The customer contact is one of the most important topics to me – it allows me to develop a solution together with the customer and helps to build a reliable partnership."

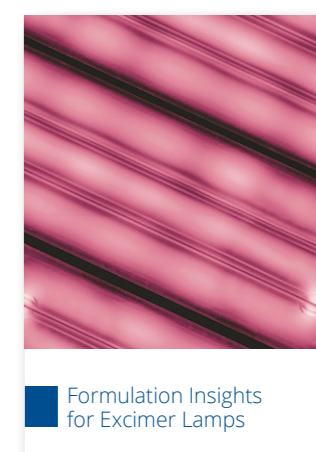
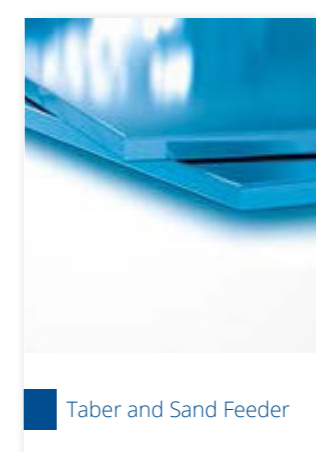
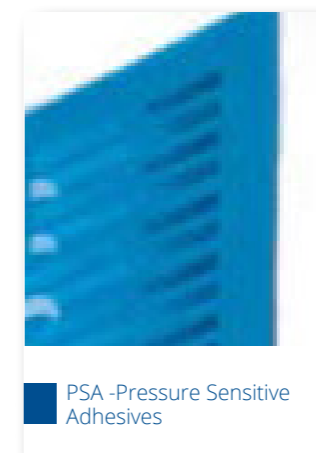
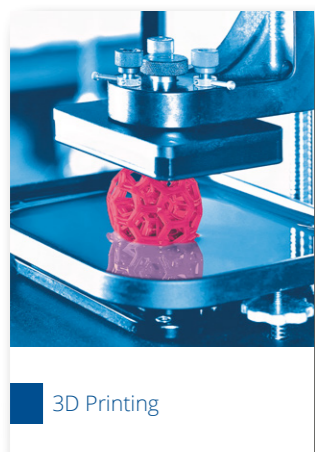
TECHNICAL LITERATURE

Additional RAHN-documents are available. For more details click on our website at www.rahn-group.com/energycuring or contact your local RAHN-Sales Representative for further information.

Product Guide

Product Guide is available on our website as PDF in English and Chinese.

Lab Reports



TECHNICAL LITERATURE

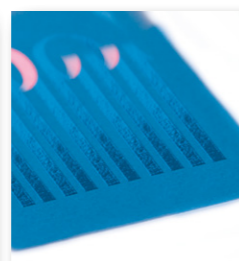
Product Flash



ACMO



Bio-Based Contents of RAHN-Products



GENOMER* 3364, 3497, 3414 & 3457



GENOMER* 4217 & 4425



GENOMER* 7287



GENOPOL Polymeric Photoinitiators



GENORAD* 21



Printed Electronics



Reactive Diluents Product Line



GENOMER* 4277



GENOMER* 4293



GENOMER* 3143



GENOCURE* FMP



GENOMER* 1226



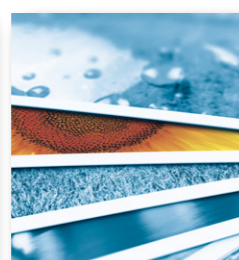
GENOMER* 1122 & TF



GENOMER* 2281



GENOMER* 3486



MIRAMER LR3130



EPOXY METHACRYLATE 97-053



GENOMER* 7244

Identification Code

GENOMER* Product-code

1st digit: Product Group

2nd digit: Functionality

3rd and 4th digit: Product reference

Product Data

Color A = APHA

Color G = Gardner

2 = Literature Value

HS & Registration Status

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals (EU)

TSCA = Toxic Substance Control Act (USA), active inventory

IECSC = Inventory of Existing Chemical Substances Produced or Imported in China

Swiss Ordinance = Swiss Ordinance on Materials and Articles, SR 817.023.21 (Packaging Inks)

Applications / Abbreviation

Digital Inks = DIG

Offset Inks = OFF

Flexo inks = FLE

Screen Inks = SCR

Overprint Varnishes = OPV

Wood Coatings = WOC

Dilutions

M22 = GENOMER* 1122

PP = PPTTA

EHA = 2-Ethylhexyl-Acrylate

ETM = TMP(EO)3TA

HD = HDDA

TM = TMPTA

TP = TPGDA

GP = GPTA

Ask for other available dilutions

Properties

++++ = excellent

+++ = good

++ = moderate

+ = low

· = provides the mentioned property

R = Registered (NB non-EU customers please contact RAHN before importing the product into the EU as per REACH regulation)

N = Not registered / not on inventory

L = Yes, is on inventory

J = Special status, contact RAHN HSR

Composites = COM

Electronics = ELE

Adhesives = ADH

Coatings on Plastics = PLA

3D Printing = 3DP

Cosmetics & Dental = DNC

Features



= Product featured for LED application

Features



= The bio content figures, in this case 85%, listed in this brochure are measured using the standard ASTM D6866 analyses. D6866 uses the measured carbon-14 content to calculate the bio-based carbon content of the product and hence shows how much of the product is derived from plant components versus petroleum-derived components. The bio-based product is therefore expressed as a percentage of the overall weight of the product in question (EN16785-1). It should also be noted that the bio-based content of a material is not an indicator of the biodegradability of the material and not all bio-based bioplastics are biodegradable.

Reactive Diluents

Product	Product Data (Typical Values)									HS & Registration				Properties						Applications				Key Features							
Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Surface Tension Dynes/cm	Molecular Weight (g/mol)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Gloss	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE	Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC	3D Printing = 3DP		
Monofunctionals																															
GENOMER* 1121M	IBOMA	1	20 A	0,5	8	113	29,4	222	1,477	R	L	L	L																		Very high Tg, good cutting power, high hardness, good adhesion and moisture resistance
GENOMER* 1121Y	IBOA	1	10 A	0,1	8	80	31,7	208	1,474	R	L	L	L	•																	High Tg but also good flexibility, good cutting power, good adhesion and moisture resistance
GENOMER* 1122	Aliph. Ureth. Acryl.	1	20 A	1,0	30	-3	33,3	215	1,460	R	L	L	N		•	•															High flexibility and low odor, excellent adhesion on plastics
GENOMER* 1122TF^o	Aliph. Ureth. Acryl.	1	25 A	3,0	35	-	-	215	1,459	R	L	L	L		•	•															High flexibility and low odor, excellent adhesion on plastics, tin free
GENOMER* 1125	DCPA	1	25 A	0,5	14	110	36	204	1,508	R	L	L	L	•	•																Good adhesion on plastics, excellent water resistance, high reactivity
MIRAMER M122	LA	1	150 A	0,5	15	-30 ²	30	240	1,442	R	L	L	L																		Hydrophobic, flexibility, low volatility and good adhesion
MIRAMER M130	IDA	1	100 A	0,2	7	-60 ²	24,3	212	1,440	R	L	L	L																		Hydrophobic, flexibility and adhesion, low Tg and surface tension
MIRAMER M140	PH(EO)A	1	100 A	0,1	13	5	40,1	192	1,516	R	L	L	L																		Good cutting power, good adhesion on plastics
MIRAMER M144	PH(EO)4A	1	20A	0,3	35	-32	41,9	324	1,500	R	L	L	L																		Good adhesion, good flexibility, low shrinkage
MIRAMER M164	NP(EO)4A	1	200 A	0,3	100	-28	34,3	450	1,494	R	L	L	L																		Low volatility and low odor, good adhesion
MIRAMER M166	NP(EO)8A	1	150 A	0,5	130	-41	34,9	626	1,489	R	L	L	N	•	•	•															High flexibility and low odor, low volatility
MIRAMER M170	EOEOEA	1	150 A	0,3	10	-53	29,7	188	1,437	R	L	L	L																		High flexibility and low shrinkage, low Tg, excellent cutting power
Difunctionals																															
GENOMER* 1226	MPDDA	2	15 A	0,5	7	50	33	226	1,454	R	L	N	L	•	•	•	•	•													Excellent cutting power, outstanding adhesion on plastics, low viscosity, low odor, weatherability
GENOMER* 1231	TCDDA	2	122 A	0,03	136	110	38,0	304	1,503	R	L	L	L	•	•	•	•														Good adhesion, excellent flexibility and toughness, heat resistance, low polarity
MIRAMER M200	HDDA	2	50 A	0,2	10	43 ²	35,9	226	1,465	R	L	L	L	•	•	•	•	•													Excellent cutting power, outstanding adhesion on plastics, weatherability
MIRAMER M210	HPNDA	2	100 A	0,3	30	115	33,2	312	1,453	R	L	L	L	•		•	•	•													Low viscosity, good hardness and adhesion
MIRAMER M216	NPG(PO)2DA	2	35 A	0,1	15	32	30,6	328	1,446	R	L	L	L	•	•	•	•														Low viscosity, good flexibility
MIRAMER M220	TPGDA	2	100 A	0,2	18	62 ²	33,3	300	1,449	R	L	L	L	•	•	•		•													Low volatility, good cutting power
MIRAMER M222	DPGDA	2	100 A	0,3	15	104 ²	33,5	242	1,450	R	L	L	L	•	•	•		•													Low volatility, good cutting power, high Tg
MIRAMER M240	BPA(EO)4DA	2	3 G	0,2	1200	60 ²	42,1	512	1,537	R	L	L	L	•	•		•	•													Good hydrophobic and hydrophilic balance, good heat resistance
MIRAMER M280	PEG400DA	2	100 A	0,3	70	-22	42,6	508	1,466	R	L	L	L	•	•	•															Water soluble, high flexibility, low shrinkage and low odor
MIRAMER M282	PEG200DA	2	100 A	0,5	25	-	40,1	308	1,464	R	L	L	L					•													Soft and flexible
MIRAMER M284	PEG300DA	2	150 A	0,5	50	-8	41,6	408	1,466	R	L	L	L		•	•															Water soluble, high flexibility and low shrinkage
MIRAMER M286	PEG600DA	2	150 A	0,5	85	-36	42,3	708	1,468	R	L	L	L	•	•	•															Water soluble, high flexibility and low shrinkage

^otin free (free of intentionally added tin compounds)

Reactive Diluents

Product	Product Data (Typical Values)									HS & Registration				Properties						Applications				Key Features																																		
Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Surface Tension Dynes/cm	Molecular Weight (g/mol)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Gloss	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks	= DIG	Offset Inks	= OFF	Composites	= COM	Flexo inks	= FLE	Electronics	= ELE	Screen Inks	= SCR	Adhesives	= ADH	Overprint Varnishes	= OPV	Coatings on Plastics	= PLA	Wood Coatings	= WOC	3D Printing	= 3DP																		
Tri- and Poly-Functionals																																																										
MIRAMER M300	TMPTA	3	50 A	0,2	110	62 ²	36,6	296	1,472	R	L	L	L	•	•	•	•																									Excellent reactivity, good offset properties, chemical resistance, low volatility																
MIRAMER M3130	TMP(EO)3TA	3	15 A	0,1	60	40	38,1	428	1,469	R	L	L	L	•	•	•	•																								Higher reactivity, flexibility and viscosity reduction compared to TMPTA																	
MIRAMER LR3130	TMP(EO) _n TA	3	15 A	0,2	65	30	38,8	428	1,468	R	L	L	L	•	•	•	•																								Similar properties to M3130 with low TMPTA residual																	
MIRAMER M3150	TMP(EO)15TA	3	20 A	0,3	190	-31	42	956	1,471	R	L	L	L			•																								Good flexibility, low shrinkage, hydrophilic																		
MIRAMER M3160	TMP(EO)6TA	3	10 A	0,2	90	22	39,6	560	1,470	R	L	L	L	•	•	•																								High reactivity, good flexibility, hydrophilic																		
MIRAMER M3190	TMP(EO)9TA	3	140 A	0,3	130	-3 ²	40,2	692	1,469	R	L	L	L	•		•																								High reactivity, good flexibility, low shrinkage, hydrophilic																		
MIRAMER M320[▲]	GPTA	3	150 A	1,0	110	33	36	428	1,461	R	L	L	L	•	•	•	•																							High reactivity, pigment wetting, good hardness and litho properties																		
MIRAMER M340	PETA	3	200 A	2,0	1800	103 ²	40,6	298	1,480	R	L	L	L	•	•	•	•	•																						High reactivity and hardness with pendant OH groups, chemical resistance and low vapor pressure																		
MIRAMER M360	TMP(PO)3TA	3	150 A	0,3	110	-15 ²	34	470	1,459	R	L	L	L	•		•	•	•																						High reactivity, good flexibility																		
MIRAMER M410	DITMPTA	4	150 A	0,1	600	98 ²	36,8	467	1,476	R	L	L	L	•	•	•	•																							Excellent reactivity and cross-linking																		
MIRAMER M4004	PPTTA	4	100 A	0,1	150	33	40,9	572	1,471	R	L	L	L	•	•	•	•																							High reactivity, excellent scratch resistance																		
MIRAMER M600	DPHA	6	150 A	0,2	7000	35	41,1	578	1,489	R	L	L	L	•		•	•																							Very high reactivity and surface hardness																		

[▲]also available as toluene-free version MIRAMER M320F



Epoxy Acrylates

Product	Product Data (Typical Values)							HS & Registration				Properties						Applications				Key Features							
	Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Pigment Wetting	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE		Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC	3D Printing = 3DP
GENOMER* 2235	Aliphatic Epoxy Acrylate	2	3 G	7	1100	45	1,480	R	L	L	N	++++	++	+++	++	++++	+++	DIG, FLE, SCR, OPV, WOC, ADH, PLA, 3DP											High reactivity, very low viscosity, excellent chemical and stain resistance
GENOMER* 2252	Epoxy Acrylate	2	1 G	1	5400 (60°C/140°F)	105	1,560	R	L	L	L	++++	+	++	++++	++++	+	OFF, FLE, SCR, OPV, WOC, COM, ADH, PLA											Excellent reactivity, high scratch and chemical resistance
GENOMER* 2253	Modified Epoxy Acrylate	2	1 G	1	30 000	-1	1,523	R	L	L	L	++++	++	++++	+	++++	++++	FLE, SCR, OPV, WOC, ADH, PLA, 3DP											High reactivity, high flexibility, medium viscosity, good adhesion on plastics
GENOMER* 2259	Modified Epoxy Acrylate	2	2 G	1	25 000	85	1,533	R	L	L	L	++++	++++	++	++++	++++	++	OFF, FLE, SCR, OPV, WOC, ADH, PLA											Good pigment wetting and offset properties, medium viscosity, good reactivity
GENOMER* 2263	Epoxy Acrylate	2	1 G	4	4000 (60°C/140°F)	99	1,560	R	L	L	L	++++	+	++	++++	++++	+	OFF, FLE, SCR, OPV, WOC, COM, ADH, PLA, 3DP											Excellent reactivity, high scratch and chemical resistance
GENOMER* 2280	Modified Epoxy Acrylate	2	2 G	4	5000 (60°C/140°F)	62	1,530	R	L	L	L	++++	+++	++	++++	++++	++	OFF, FLE, SCR, OPV, WOC, COM, ADH, PLA											Excellent balance of properties, high reactivity, hardness, flexibility and toughness
GENOMER* 2281	Modified Epoxy Acrylate	2	1 G	1	4500 (60°C/140°F)	66	1,530	R	L	L	L	++++	+++	++	++++	++++	+++	OFF, FLE, SCR, OPV, WOC, COM, ADH, PLA, 3DP											Excellent balance of properties, high reactivity, hardness, flexibility, toughness, adhesion and pigment wetting and flow
GENOMER* 2312	Epoxydized Soy Oil Acrylate	3	7 G	7	20 000	-12	1,484	R	L	L	L	++	++++	++++	++	++++	+++	OFF, FLE, SCR, OPV, WOC											Excellent flexibility, low shrinkage, excellent pigment wetting

Available dilutions: GENOMER* 2252 in TP20, TP30, TP40, TM20 and GP25

Polyester/Polyether Acrylates

Product	Product Data (Typical Values)							HS & Registration				Properties						Applications				Key Features							
	Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Pigment Wetting	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE		Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC	3D Printing = 3DP
GENOMER* 3143	Polyester Acrylate	1	19 A	2	4 500 (60°C/140°F)	28	1,491	R	Ⓝ	Ⓝ	N	+	+++	++	++	+	++	FLE, SCR, WOC, ADH, PLA, 3DP											Thermoplastic-like behaviour, high transparency and clarity, low yellowing, partly water solubility after curing
GENOMER* 3364	Polyether Acrylate	3	15 A	0,5	130	26	1,475	R	L	L	L	++	++	++	+++	++++	++	DIG, FLE, SCR, OPV, WOC, ADH, PLA, 3DP											High reactivity, low viscosity, good solvent resistance
POLYESTER ACRYLATE 03-849	Polyester Acrylate	3	3 G	8	20 000	19	1,506	R	L	L	L	+++	+++	++++	++	+++	++	OFF, FLE, SCR, OPV, WOC, ADH, PLA											Good reactivity, good abrasion and chemical resistance, good overall properties
GENOMER* 3414	Polyether Acrylate	4	50 A	0,5	4500	-14	1,483	R	L	L	L	++++	++	++++	++	++++	+++	DIG, FLE, SCR, OPV, WOC, ADH, PLA, 3DP											High reactivity, low viscosity, good solvent and scratch resistance, flexibility and adhesion, low Tg
GENOMER* 3430	Polyether Acrylate	4	1 G	1	600	-6	1,479	R	L	N	L	++++	++	++++	++	++++	+++	DIG, FLE, SCR, OPV, WOC, PLA											High reactivity in LED formulations, good flexibility, low yellowing, good adhesion
GENOMER* 3457	Polyether Acrylate	4	20 A	0,2	1250	12	1,484	R	L	Ⓝ	L	++++	++	++	+++	++++	++	FLE, SCR, OPV, WOC, ADH, PLA, 3DP											High reactivity, high hardness, chemical resistance and adhesion
GENOMER* 3486	Polyester Acrylate	4	3 G	8	500	20	1,465	R	L	L	L	++	+++	++	+++	++++	+++	FLE, SCR, OPV, WOC, ADH, PLA, 3DP											low viscosity, good surface hardness, chemical resistance, adhesion and pigment wetting
GENOMER* 3497	Polyether Acrylate	4	40 A	0,5	600	2	1,479	R	L	L	L	+++	++	+++	++	++++	++	DIG, FLE, SCR, OPV, WOC, ADH, PLA, 3DP											High reactivity, low viscosity, good solvent resistance
GENOMER* 3611	Polyester Acrylate	6	10 G	8	8000	7	1,490	R	L	N	L	+++	++++	+	++++	++++	+++	OFF, FLE, SCR											High reactivity, very good pigment wetting and lithographic behavior

Urethane Acrylates

Product	Product Data (Typical Values)							HS & Registration				Properties						Applications				Key Features						
	Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Refractive Index	REACH-Status	Active TSCA-inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Pigment Wetting	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE		Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC
GENOMER* 4188/EHA	Aliphatic UA	1	100 A	5	120 000	-14	1,480	R	L	L	N	+	++	++++	+	+	++++	ADH, SCR, PLA										High tack, high elongation and excellent adhesion
GENOMER* 4212	Aliphatic UA	2	1 G	2	14 000	-7	1,486	R	L	Ⓝ	N	+	++	++++	+	+++	+++	FLE, SCR, OPV, WOC, ADH, PLA									Good flexibility, low viscosity, low yellowing, good adhesion	
GENOMER* 4215	Aliphatic UA	2	2 G	1	20 000 (60°C/140°F)	-22	1,497	R	L	L	N	+++	+++	++++	+	+++	++++	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									Good adhesion to PVC and other plastics	
GENOMER* 4217	Aromatic UA	2	1 G	3	100 000	-36	1,490	R	L	L	N	++	+++	++++	+	++	+++	OFF, SCR, OPV, WOC, COM, ELE, ADH, PLA									Excellent flexibility, good adhesion to difficult substrates, good for metallic inks	
GENOMER* 4230	Aliphatic UA	2	40 A	2	35 000	-53	1,460	R	L	L	N	+	++	++++	+	+	+++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									Good flexibility, non yellowing, peroxide cure	
GENOMER* 4259	Aliphatic UA	2	20 A	1	11 000	85	1,489	R	L	N	L	++	++	+	++++	++++	++	DIG, COM, ELE, PLA, 3DP									Provides exceptional hardness and toughness, low viscosity, low color	
GENOMER* 4267	Aliphatic UA	2	1 G	4	16 000 (60°C/140°F)	-10	1,490	R	L	L	N	++	+++	++++	++	+++	++++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									Excellent flexibility and toughness, good adhesion	
GENOMER* 4269/M22	Aliphatic UA	2	1 G	3	55 000	-13	1,479	R	L	L	N	+	+++	++++	+	+	++++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									Flexibilizer resin, good toughness, high flexibility, excellent adhesion	
GENOMER* 4293	Aliphatic UA	2	27 A	2	25 000 (60°C/140°F)	67	1,473	R	Ⓝ	Ⓝ	N	++	++	++	++++	++++	++	OFF, FLE, SCR, OPV, WOC, ADH, PLA, 3DP									Thermoplastic-like behavior, shows shape-memory effect after curing, outstanding hardness, scratch and abrasion resistance, high transparency and clarity	
GENOMER* 4302	Isocyanurate	3	80 A	1	10 000 (60°C/140°F)	90	1,509	R	L	Ⓝ	N	+++	++	++++	++++	++++	+++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA									Fast, hard and excellent chemical resistance, non yellowing, high E-modulus	
GENOMER* 4312	Aliphatic UA	3	1 G	1	60 000	32	1,497	R	L	L	N	+++	+++	++++	++	+++	+++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA									High reactivity and good flexibility, good adhesion, abrasion and scratch resistance	
GENOMER* 4312TF[∘]	Aliphatic UA	3	1 G	1	60 000	32	1,497	R	L	L	L	+++	+++	++++	++	+++	+++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA									High reactivity and good flexibility, good adhesion, abrasion and scratch resistance, tin free	
GENOMER* 4316	Aliphatic UA	3	1 G	1	58 000	7	1,493	R	L	L	N	+++	+++	++++	++	++	+++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA									High reactivity and very good flexibility, good adhesion, abrasion and scratch resistance	
GENOMER* 4335	Aliphatic UA hydroxy functional	3	1 G	1	50 000	17	1,491	R	L	Ⓝ	N	+++	++	++	++++	++++	++	SCR, WOC, PLA									Dual curable OH and acrylate groups with outstanding chemical resistance and hardness	
GENOMER* 4383/W	Aliphatic UA Dispersion	3	-	1	30	74	-	R	L	N	N	++	+	++	+++	+++	+++	SCR, WOC, PLA									Water-based dispersion, sandable after physical drying	
GENOMER* 4425	Aliphatic UA	4	1 G	5	4500	18	1,478	R	L	Ⓝ	N	+++	++	++	+++	++++	+++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									High reactivity, low viscosity, balance of flexibility and good hardness	
GENOMER* 4515	Aromatic UA	5	3 G	1	1300	25	1,485	R	L	N	N	++++	+++	+	+++	++++	++	DIG, FLE, SCR, OPV, WOC, PLA									High reactivity in LED formulations, good hardness and toughness	
GENOMER* 4590/PP	Aliphatic UA	5	2 G	1	11 000	42	1,491	R	L	N	N	+++	+++	+	++++	++++	++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA									Low viscosity, excellent reactivity and hardness	
GENOMER* 4622	Aromatic UA	6	2 G	3	30 000	55	1,510	R	L	L	N	++++	+++	+	++++	++++	++	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									Very fast with good hardness and chemical resistance	
GENOMER* 4690	Aliphatic UA	6	1 G	1	80 000	55	1,497	N	L	L	N	+++	+++	+	++++	++++	++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									Outstanding hardness, scratch and abrasion resistance and low yellowing	
GENOMER* 4691	Aliphatic UA	6	1 G	1	100 000	55	1,497	R	L	L	N	+++	+++	+	++++	++++	++	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP									Outstanding hardness, scratch and abrasion resistance and low yellowing	

Available dilutions: GENOMER* 4188/M22, GENOMER* 4215/M22.

[▲]diluted in 20% Toluene for measuring purposes only

[∘] tin free (free of intentionally added tin compounds)


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Oligoamines

Product	Product Data (Typical Values)							HS & Registration				Properties					Applications				Key Features								
	Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Pigment Wetting	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE	Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC	3D Printing = 3DP	
GENOMER* 5142	Acrylated Amine Synergist	<1	2 G	220	20	-	1,450	R	L	L	L	n/a	n/a	n/a	n/a	n/a	n/a	DIG, FLE, SCR, OPV, WOC, ADH, PLA										Improves cure speed and surface cure. Low viscosity, high amine value, excellent compatibility	
GENOMER* 5161	Acrylated Amine Synergist	<1	2 G	230	80	-	1,470	R	L	N	L	n/a	n/a	n/a	n/a	n/a	n/a	DIG, FLE, SCR, OPV, WOC, ADH, PLA										Improves cure speed and surface cure. Low viscosity, high amine value, excellent compatibility	
GENOMER* 5271	Amine Acrylate	2	2 G	140	1200	-48	1,482	R	L	L	L	++++	n/a	++++	++	+	++++	FLE, SCR, OPV, WOC, ADH, PLA										Excellent surface cure, low odor, excellent adhesion and low viscosity	
GENOMER* 5275	Amine Acrylate	2	1 G	150	3700	-48	1,486	R	L	L	L	++++	n/a	++++	++	+	++++	DIG, FLE, SCR, OPV, WOC, ADH, PLA										Excellent surface cure, low odor, excellent adhesion	
GENOMER* 5695	Acrylated Oligoamine	6	1 G	85	8000	-27	1,489	R	L	J	L	++++	n/a	++++	++	++	++++	FLE, SCR, OPV, WOC, ADH, PLA, 3DP										High reactivity in LED formulations, good surface cure, good adhesion, low yellowing	

Co-Resins

Product	Product Data (Typical Values)							HS & Registration				Properties					Applications				Key Features									
	Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Pigment Wetting	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE	Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC	3D Printing = 3DP		
GENOMER* 6043/M22	Modified Polyester Resin	n/a	1 G	5	30 000	-14	1,495	R	L	L	N	+	++	++++	+	+	++++	SCR, ADH											Flexibilizer resin for PSA, low yellowing, excellent adhesion	
GENOMER* 6050/TM	Modified Polyester Resin	n/a	2 G	4	125 000	19	1,508	R	L	L	L	++	++++	++++	++	+	++++	OFF, FLE, SCR, OPV, ADH, PLA											Excellent adhesion on plastics, good offset behavior	
GENOMER* 6058	Sucrose Benzoate	n/a	30 A	0,3	-	68	1,577	R	L	L	L	+	++	+	+++	+	++	OFF, FLE, SCR, OPV, WOC, ADH, PLA											Maintains gloss compared with inorganic fillers, good adhesion on plastics	
GENOMER* 6083/HD	Inert Resin	n/a	2 G	2	110 000	51	1,485	R	L	L	L	+	++++	++	+++	++	++++	SCR, OPV, WOC, ADH, PLA											Excellent adhesion on plastics, pigment wetting, high Tg	

Available dilutions: GENOMER* 6050/GP, GENOMER* 6083/TP, GENOMER* 6083/ETM

Specialities














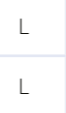















Product	Product Data (Typical Values)							HS & Registration				Properties						Applications				Key Features						
	Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPas at 25 °C)	Tg (°C)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Pigment Wetting	Flexibility	Hardness	Chemical Resistance	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE		Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC
ACMO	Acryloyl Morpholine	1	10 A	-	12	145	1,512	R	L/ SNUR	L	L	n/a	n/a	n/a	n/a	n/a	++++	DIG, FLE, SCR, WOC, ELE, ADH, PLA, 3DP										Very high Tg, water soluble, good thermal stability, good adhesion
GENOMER* 7151	Carboxyfunctional Polyester Acrylate	1	2 G	210	7000	37	1,530	N	L	L	L	++	n/a	+	+++	+	++++	SCR, WOC, ELE, ADH										Good adhesion on metal and glass
GENOMER* 7287	Speciality Resin	2	40 A	2	12	-28	1,457	R	L	L	L	++	++	+++	++	++++	+++	DIG, FLE, SCR, OPV, WOC, PLA										Provides superior matting properties, low viscosity and reasonable reactivity, easy incorporation of matting agent
GENOMER* 7302	Speciality Resin	3	1 G	3	110	31	1,486	R	L	L	N	+++	n/a	++	n/a	n/a	++	OPV, WOC, ELE, ADH, PLA, 3DP										Low oxygen inhibition, enhanced surface cure, UV LED, low viscosity, low odor
GENOMER* 7311	Water Soluble Acrylate Resin	3	40 A	0,2	1200	-40	1,477	R	L	L	L	+++	++	++++	++	+	+++	FLE, SCR, OPV, ADH, PLA, 3DP										Water solubility, good reactivity, excellent flexibility, high gloss and low yellowing
DMAA	Dimethyl Acrylamide	1	80 A	-	1	110	1,472	R	L	L	L	+++	n/a	++	n/a	n/a	++	DIG, SCR, ELE, ADH, PLA, 3DP										Low viscosity, very good optical clarity, water soluble and very good moisture vapor transition rate. Very good oxygen penetration and water holding capacity

Additives

Product	Product Data (Typical Values)				HS & Registration				Properties				Applications				Key Features							
	Description	Color	Acid Value (mg KOH/g)	Viscosity (mPas at 25 °C)	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Retain Reactivity	Retain Color	Retain Viscosity	Adhesion	Digital Inks = DIG	Offset Inks = OFF	Composites = COM	Flexo inks = FLE		Electronics = ELE	Screen Inks = SCR	Adhesives = ADH	Overprint Varnishes = OPV	Coatings on Plastics = PLA	Wood Coatings = WOC	3D Printing = 3DP
GENORAD* 16	In-can Stabilizer	3 G	15	1200	R	L	L	L	•		•		DIG, OFF, FLE, SCR, WOC, ELE											Highest performance stabilizer for grinding and storage, works anaerobically, no effect on reactivity
GENORAD* 18	In-can Stabilizer	4 G	7	2000	R	L	L	L	•		•		OFF, FLE, SCR, WOC, ELE											High performance stabilizer for grinding and storage, works anaerobically, no effect on reactivity
GENORAD* 20	In-can Stabilizer	1 G	2	1000	R	L	L	N	•	•	•		DIG, OPV, WOC, COM, ELE, ADH, PLA, 3DP											Excellent stabilizer in clear coatings
GENORAD* 21	In-can Stabilizer	10 G	-	2000	R	L	L	N	•		•		DIG, OFF, FLE, SCR, ELE											In-can stabilizer for UV-curable metallic inks
GENORAD* 22	In-can Stabilizer	2 G	30	20	R	L	L	L	•		•		DIG, OFF, FLE, SCR, WOC, ELE											Premium stabilizer for grinding and storage, works anaerobically, no effect on reactivity, especially suitable for UV inkjet inks
GENORAD* 23	In-can Stabilizer	6 G	2	140	R	L	L	L	•		•		DIG, OFF, FLE, SCR, WOC, ELE, ADH											Excellent all-purpose in-can stabilizer, acts as a polymerization inhibitor and improves shelf-life of UV curable formulations.
GENORAD* 24	In-can Stabilizer	dark	0,2	3500	R	L	L	L	•		•		DIG, OFF, FLE, SCR, WOC, ELE, 3DP											High molecular weight in-can stabilizer. Excellent efficiency in UV LED and other free radical systems.
GENORAD* 26	In-can Stabilizer	4 G	13	120	R	L	L	L	•		•		DIG, OFF, FLE, SCR, WOC, ELE											Premium stabilizer for grinding and storage, works anaerobically, no effect on reactivity, BPA free
GENORAD* 40	Adhesion Promoter	100 A	295	2000	R	L	L	L			•		FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA											Adhesion promoter on metal, glass and plastics
GENORAD* 41	Adhesion Promoter	100 A	290	1500	N	L	L	L			•		FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA											Adhesion promoter on metal, glass and plastics

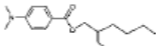
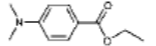
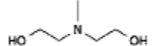


Photoinitiators

Product	Product Data (Typical Values)						HS & Registration				Applications	Key Features	
Description	Purity (%)	Melting Point °C (Viscosity [mPa.s at 25 °C])	Melting Point °F (Viscosity [mPa.s at 77 °F])	Absorption (nm)	Structure	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Digital Inks = DIG Offset Inks = OFF Flexo inks = FLE Screen Inks = SCR Overprint Varnishes = OPV Wood Coatings = WOC	Composites = COM Electronics = ELE Adhesives = ADH Coatings on Plastics = PLA 3D Printing = 3DP		
GENOCURE* BAPO	Phenylbis (2,4,6-trimethylbenzoyl) phosphine oxide	≥ 98	127-132	260-269	292/370		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	Shows excellent through cure in pigmented systems, low odor	
GENOCURE* BDK	Benzildimethylketal	> 99.5	66	151	252		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	General purpose where non yellowing not essential	
GENOCURE* BDMM	2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)-butanone-1	> 98.0	110-123	230-244	230/325		R	L	L	L	DIG, OFF, FLE, SCR, OPV, COM, ELE, ADH, PLA	Excellent through cure in dark color pigmented systems. Combinations with other photoinitiators	
GENOCURE* BMS	4-Benzoyl- 4'methyldiphenylsulphid	> 98.0	75-85	167-185	246/315	-	R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, ELE, ADH, PLA, 3DP	High reactivity, good solubility, LED curing 365nm, for pigmented systems in combination with amine synergists and thioxanthenes	
GENOCURE* BP	Benzophenone	> 99.0	47-49	117-120	254		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	General purpose, low cost	
GENOCURE* CPK	1-Hydroxycyclohexylphenylketone	> 99.0	48	118	247		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	Low yellowing	
GENOCURE* DEAP	2,2 Diethoxyacetophenone	> 95.0	(~7)	(~7)	210/250		N	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	Non yellowing, insoluble in water	
GENOCURE* DETX	2,4 Diethylthioxanthone	> 98.0	72	162	261/384		R	L/ SNUR	L	L	DIG, OFF, FLE, SCR, WOC, 3DP	Pigmented systems in combination with amines and e.g. GENOCURE* BDMM	
GENOCURE* DMHA	Dimethylhydroxyacetophenone	> 98.0	4	39	247/277		R	L	L	N	DIG, OPV, FLE, SCR, WOC, ELE, ADH, PLA	Low yellowing, liquid	
GENOCURE* EMK	4,4-Bis (diethylamino) benzophenone	> 99.0	92-96	197-204	205/375		N	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, PLA, 3DP	Excellent efficacy in pigmented systems, has Type II photoinitiator and alkyl amine functionality. Usable in UV/LED systems	
GENOCURE* FMP	1-(9,9-Dibutyl-9H-fluoren-2-yl)-2-methyl-2-morpholin-4-yl-propan-1-one	> 98.5	65-70	149-158	313	-	R	N	L	N	DIG, OFF, FLE, SCR, OPV, WOC, ELE, ADH, PLA	Very low color. Not classified as a CMR substance. Can be used as an alternative to CMR1-classified photoinitiators such as GENOCURE* PMP and BDMM	
GENOCURE* ITX	Isopropylthioxanthone	> 98.0	74-76	165-169	259/383		R	L	L	N	DIG, OFF, FLE, SCR, WOC, COM, ELE, 3DP	Pigmented systems in combination with amines and e.g. GENOCURE* BDMM	
GENOCURE* LBC	1-Hydroxycyclohexylphenylketone and Benzophenone	> 98.0	-	-	250/330		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	Liquid with good balance of surface and through cure for clear coatings	
GENOCURE* LBP	4-Methylbenzophenone and Benzophenone	> 99.0	(~90)	(~90)	257		N	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	General purpose, liquid	
GENOCURE* LTD	2,4,6 Trimethylbenzoyldiphenylphosphine oxide Dimethylhydroxyacetophenone	> 98.0	-	-	240/272/ 367		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	Liquid photoinitiator for non yellowing clear and white pigmented systems	
GENOCURE* LTM	Liquid Photoinitiatorblend	> 97.0	(~20)	(~20)	253/368	-	R	L	L	L	DIG, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	White and thick coatings, liquid with good balance of surface and through cure, non yellowing	
GENOCURE* MBB	Methyl-o-benzoyl-benzoate	> 99.0	50-52	122-126	246		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	Good surface cure	
GENOCURE* MBF	Methylbenzoylformate	> 97.0	(~5)	(~5)	257		R	L	L	L	DIG, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	Clear coatings, excellent surface curing photoinitiator especially in amine-free systems, low odor	
GENOCURE* PBZ	4-Phenylbenzophenone	> 99.0	99-103	210-217	295		N	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, ELE, ADH	High reactivity, low odor	
GENOCURE* PMP	2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	> 99.0	74-76	165-169	307		R	L	L	L	DIG, OFF, FLE, SCR, OPV, COM, ELE, ADH	Pigmented systems in combination with other photoinitiators	
GENOCURE* TPO	2,4,6-Trimethylbenzoyldiphenylphosphine oxide	> 99.0	92-94	198-201	380		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	White and thick coatings, non yellowing	
GENOCURE* TPO-L	Ethyl(2,4,6-trimethylbenzoyl) phenylphosphinate	≥ 93.0	-	-	370/275		R	L	L	L	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	Liquid, white and thick coatings, non yellowing	



Synergists

Product	Product Data (Typical Values)						HS & Registration				Applications	Key Features
Description	Purity (%)	Melting Point °C (Viscosity [mPa.s at 25 °C])	Melting Point °F (Viscosity [mPa.s at 77 °F])	Absorption (nm)	Structure	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Digital Inks = DIG Offset Inks = OFF Flexo inks = FLE Screen Inks = SCR Overprint Varnishes = OPV Wood Coatings = WOC	Composites = COM Electronics = ELE Adhesives = ADH Coatings on Plastics = PLA 3D Printing = 3DP	
GENOCURE* ABD	Aminobenzoate Derivative	> 99	(~13 000)	(~13 000)	228/310	-	R	L	Ⓝ	L	DIG, OFF, FLE, SCR, OPV, COM, ELE, ADH	Water insoluble synergist suited for litho systems, liquid
GENOCURE* EHA	2-Ethylhexyl-4-dimethylaminobenzoate	> 99.0	(~80)	(~80)	228/311		Ⓝ	L	L	L	OFF, FLE, SCR, COM, ELE, ADH	Water insoluble synergist suited for litho systems, liquid
GENOCURE* EPD	Ethyl-4-dimethylaminobenzoate	> 99.0	63	142	228/310		R	L	L	L	OFF, FLE, SCR, COM, ELE, ADH	Water insoluble synergist suited for litho systems
GENOCURE* MDEA*	N-Methyldiethanolamine	> 99.0	(~100)	(~100)	220		R	L	L	L	FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	Low cost amine synergist

GENOCURE MDEA – subject to chemical weapons convention

Polymeric Photoinitiators

Product	Product Data (Typical Values)				HS & Registration				Applications	Key Features
Description	Viscosity (mPa.s at 25 °C)	Molecular Weight (g/mol)	Absorption (nm)	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Digital Inks = DIG Offset Inks = OFF Flexo inks = FLE Screen Inks = SCR Overprint Varnishes = OPV Wood Coatings = WOC	Composites = COM Electronics = ELE Adhesives = ADH Coatings on Plastics = PLA 3D Printing = 3DP	
GENOPOL* AB-2	Polymeric Aminobenzoate Derivative	15 000	900	228, 310	R	L	Ⓝ	L	OFF, FLE, SCR, OPV, COM, ELE, ADH	Low migration and odor, excellent compatibility in UV formulations
GENOPOL* BP-2	Polymeric Benzophenone Derivative	120 000	980	245, 325	R	L	Ⓝ	L	OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	Low migration and odor, excellent compatibility in UV formulations
GENOPOL* TX-2	Polymeric Thioxanthone Derivative	160 000	820	225, 310, 375	R	Ⓝ	Ⓝ	L	DIG, OFF, FLE, SCR, COM, ELE	Low migration and odor, excellent compatibility in UV formulations



Dental & Cosmetic Products

We are promoting these products for use in energy curable medical application formulations. It is the responsibility of the formulator to check the suitability of these products for the intended medical application, including but not limited to, all

relevant restrictions and approvals of the local governing bodies for the intended medical application. RAHN in no way warrants that these products have any approvals for use in any of the possible medical applications that might be considered.

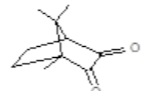
Methacrylates

Product	Product Data (Typical Values)							HS & Registration				Properties					Applications	Key Features	
Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s at 25 °C)	Tg (°C)	Refractive Index	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Reactivity	Pigment Wetting	Flexibility	Hardness	Chemical Resistance	Adhesion	Dental & Cosmetics = DNC Adhesives = ADH 3D Printing = 3DP		
Epoxy Methacrylates																			
EPOXY METHACRYLATE 97-053	Epoxy Methacrylate	2	1 G	-	4 500 (60°C/140°F)	114	1,551	R	L	L	L	+	+	+	++++	++++	+++	DNC, 3DP	Very low shrinkage, provides excellent hardness as well as abrasion and scratch resistance
Urethane Methacrylates																			
GENOMER* 4205	Aliphatic Urethane Methacrylate	2	25 A	-	9 000	99	1,483	R	L	L	N	+	++	+	++++	++++	++	DNC, ADH, 3DP	High E-modulus and good tensile strength, other characteristics are its light stability, abrasion and chemical resistance
GENOMER* 4247^o	Aliphatic Urethane Methacrylate	2	25 A	-	10 000	134	1,484	R	L	L	N	+	++	+	++++	++++	++	DNC, ADH, 3DP	Exceptional hardness and mechanical properties, high scratch and abrasion resistance, highest transparency and clarity, high gloss, low yellowing, tin free
GENOMER* 4256	Aliphatic Urethane Methacrylate	2	1 G	-	15 000*	-19	1,487	R	L	L	N	+	++	++++	+	+	+++	DNC, ADH, 3DP	Excellent elasticity and elongation, improves light stability and chemical resistance
GENOMER* 4277	Aliphatic Urethane Methacrylate	2	1 G	-	19 000 (60°C/140°F)	8	1,491	R	L	L	N	+	+++	++++	+++	+++	++++	DNC, ADH, 3DP	High flexibility and toughness, high transparency and low yellowing, good adhesion, low cure exotherm
GENOMER* 4297	Aliphatic Urethane Methacrylate	2	20 A	-	8 700	130	1,485	R	L	L	N	+	++	+	++++	++++	++	DNC, ADH, 3DP	Good stain and chemical resistance as well as high tensile strength and E-modulus, good abrasion resistance and very low yellowing
Specialities																			
GENOMER* 7244	Modified Methacrylate	2	1G	5	15000	125	1,535	R	L	L	L	+	+	+	++++	++++	+++	DNC, 3DP	High E-modulus and good tensile strength giving excellent rigidity to 3D parts. Good adhesion, abrasion and scratch resistance

*diluted in 20% Toluene for measuring purposes only

^otin free (free of intentionally added tin compounds)

Synergists

Product	Product Data (Typical Values)							HS & Registration				Applications	Key Features
Description	Purity (%)	Melting Point °C (Viscosity [mPa.s at 25 °C])	Melting Point °F (Viscosity [mPa.s at 77 °F])	Molecular Weight (g/mol)	Absorption (nm)	Structure	REACH-Status	Active TSCA inventory	IECSC-Status	Swiss Ordinance-Status	Dental & Cosmetics = DNC Electronics = ELE Adhesives = ADH 3D Printing = 3DP		
GENOCURE* CQ	Camphorquinone	> 99,0	201-203	393-397	166	470		L	L	L	ELE, ADH, DNC, 3DP	Provides good through cure in long wavelength (visible) UV light, soluble in alcohol, ketones, acrylates and methacrylates	

MECHANICAL DATA

Product	Product Data (Typical Values)							
	Description	Elongation at Break %	Tensile Strength		Modulus		Shore Hardness	T _g (°C)
			psi	MPa	psi	MPa		
Epoxy Acrylates								
GENOMER* 2235	Aliphatic Epoxy Acrylate	17	2 785	19	156 641	1 080	D 78	45
GENOMER* 2252	Epoxy Acrylate	8	3 278	23	490 228	3 380	D 88	105
GENOMER* 2253	Modified Epoxy Acrylate	41	914	6	5 294	37	A 93	-1
GENOMER* 2259	Modified Epoxy Acrylate	10	3 321	23	301 679	2 080	D 82	85
GENOMER* 2263	Epoxy Acrylate	8	3 960	27	525 038	3 620	D 87	99
GENOMER* 2280	Modified Epoxy Acrylate	18	5 860	40	452 519	3 120	D 85	62
GENOMER* 2281	Modified Epoxy Acrylate	17	4 844	33	385 801	2 660	D85	66
GENOMER* 2312	Epoxidized Soy Oil Acrylate	22	348	2	5 511	38	A 91	-12
EPOXY METHACRYLATE 97-053	Epoxy Methacrylate	5	3 234	22	500 381	3 450	D 90	114
Polyester/Polyether Acrylates								
GENOMER* 3143	Polyether Acrylate	1	435	3	8 267	57	D 62	28
GENOMER* 3364	Polyether Acrylate	5	2 480	17	155 481	1 072	D 64	26
GENOMER* 3414	Polyether Acrylate	17	261	2	6 672	46	A 88	-14
GENOMER* 3430	Polyether Acrylate	3	218	2	5 874	41	A 91	-6
GENOMER* 3457	Polyether Acrylate	7	3 916	27	298 778	2 060	D 84	12
GENOMER* 3486	Polyester Acrylate	13	3 046	21	81 366	561	D 74	20
GENOMER* 3497	Polyether Acrylate	9	725	5	24 801	171	D 68	2
GENOMER* 3611	Polyester Acrylate	5	537	4	101 237	698	D 85	7
POLYESTER ACRYLATE 03-849	Polyester Acrylate	30	1 682	12	36 840	254	D 76	19
Urethane (Meth)Acrylates								
GENOMER* 4188/EHA	Aliphatic UA	1 360	145	1	8	0,1	OO 42	-14
GENOMER* 4205	Aliphatic UMA	10	4 351	30	478 625	3 300	D 85	99
GENOMER* 4212	Aliphatic UA	27	1 769	12	147 939	1 020	D 79	-7
GENOMER* 4215	Aliphatic UA	59	1 885	13	15 374	106	D 45	-22
GENOMER* 4217	Aromatic UA	55	421	3	1 668	12	A 79	-36
GENOMER* 4230	Aliphatic UA	60	52	0	377	3	OO 87	-53
GENOMER* 4247	Aliphatic UMA	8	5 802	40	435 114	3 000	D 85	134
GENOMER* 4256	Aliphatic UMA	224	406	3	126	1	D 44	-19
GENOMER* 4259	Aliphatic UA	5	9 427	65	398 855	2 750	D 86	85
GENOMER* 4267	Aliphatic UA	75	1 885	13	13 489	93	D 48	-10
GENOMER* 4269/M22	Aliphatic UA	288	1 697	12	290	2	OO 69	-13
GENOMER* 4277	Aliphatic UMA	33	3'452	24	48 442	334	D 70	8

Test Methods

Elongation, Tensile Strength and E-Modulus: ASTM D638 – 14; DIN EN ISO 527-1
Shore Hardness: ASTM D2240; DIN ISO 7619

Product	Product Data (Typical Values)							
	Description	Elongation at Break %	Tensile Strength		Modulus		Shore Hardness	T _g (°C)
			psi	MPa	psi	MPa		
Urethane (Meth)Acrylates								
GENOMER* 4293	Aliphatic UA	3	11 748	81	461 220	3 180	D 86	67
GENOMER* 4297	Aliphatic UMA	5	4 641	32	420 609	2 900	D 78	130
GENOMER* 4302	Isocyanurate	7	6 338	44	377 099	2 600	D 87	90
GENOMER* 4312	Aliphatic UA	23	2 205	15	74 259	512	D 72	32
GENOMER* 4312/TF	Aliphatic UA	21	2 944	20	92 679	639	D 77	32
GENOMER* 4316	Aliphatic UA	47	653	5	3 249	22	D 43	7
GENOMER* 4335	Aliphatic UA Hydroxy Functional	9	3 263	23	48 298	333	D 75	17
GENOMER* 4425	Aliphatic UA	6	2 379	16	266 145	1 835	D 73	18
GENOMER* 4514	Aromatic UA	1	348	2	26 687	184	D 67	25
GENOMER* 4590/PP	Aliphatic UA	2	1 798	12	200 152	1 380	D 93	42
GENOMER* 4622	Aromatic UA	4	1 320	9	272 671	1 880	D 93	55
GENOMER* 4690/4691	Aliphatic UA	3	1 291	9	513 435	3 540	D 89	55
Oligoamines & Specialties								
GENOMER* 5271	Amine Acrylate	18	67	< 1	290	2	OO 90	-48
GENOMER* 5275	Amine Acrylate	28	67	< 1	290	2	OO 90	-48
GENOMER* 5695	Acrylated Oligoamine	9	406	3	2 553	18	A 80	-27
GENOMER* 7151	Carboxyfunctional Poly- ester Acrylate	41	1 508	10	12 038	83	D 85	37
GENOMER* 7244	Modified Methacrylate	1	5 801	40	652 670	4 500	D 88	125
GENOMER* 7287	Speciality Resin	5	73	< 1	2 335	16	A 82	-28
GENOMER* 7302	Speciality Resin	27	3 481	24	10 878	75	D 68	31
GENOMER* 7311	Acrylate Resin	8	145	1	2 610	18	A 89	-40

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