ENERGY CURING

PRODUCT GUIDE 2023

RAHN

Your partner for excellence

Contents

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

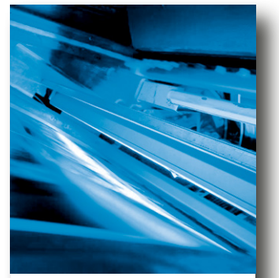
Product Guide is available on our website as PDF in English and Chinese.

Lab Reports

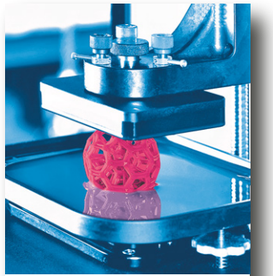
Lab Reports

Photoinitiators for UV LED

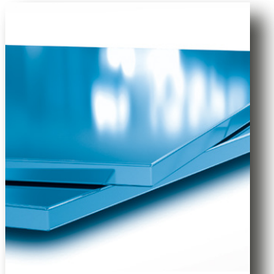
PSA -Pressure Sensitive Adhesives



Raw Material Selection for UV-LED



3D Printing



Adhesion of Oligomers to Glass and Metal

Electron Beam Curing

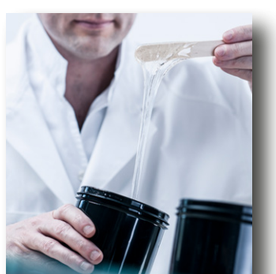
Shrinkage of UV Oligomers and Monomers

Taber and Sand Feeder

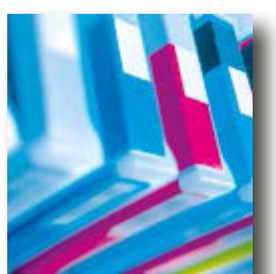
UV Curing Flexographic Inks

Electron Beam Curing Laminating Adhesives

Laminating Adhesives



Oligomer Screening



UV Inkjet Inks

UV Offset Inks

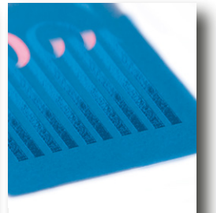
Formulation Insights for Excimer Lamps

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

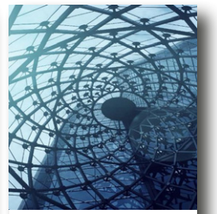
GENOMER* 4277

GENOMER* 4293

GENOMER* 3143

GENOCURE* FMP

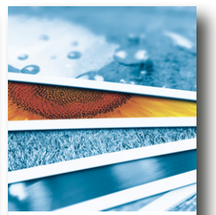
GENOMER* 1226



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	

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

Product Data

Color A	= APHA
Color G	= Gardner
2	= Literature Value

Properties

++++	= excellent
+++	= good
++	= moderate
+	= low
·	= provides the mentioned property

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)

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
☽	= Special status, contact RAHN HSR

Applications / Abbreviation

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
Cosmetics & Dental	= DNC

Features

Fit for LED TT

= Product featured for LED application

Features

85

= 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; 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	
Monofunctionals																					
GENOMER* 1121M	IBOMA	1	20 A	0,5	8	113	29,4	222	1,477	R	L	L	L				•		•	COM, ELE, ADH, PLA, 3DP	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	•			•	•	•	DIG, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	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		•	•			•	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	High flexibility and low odor, excellent adhesion on plastics
GENOMER* 1122TF◊	Aliph. Ureth. Acryl.	1	25 A	3,0	35	–	–	215	1,459	R	L	L	L		•	•			•	DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	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	•		•			•	DIG, FLE, SCR, ELE, ADH, PLA, 3DP	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			•			•	OFF, FLE, SCR, WOC, ADH	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			•			•	DIG, ADH, PLA	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			•			•	DIG, FLE, SCR, ADH, PLA,	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			•			•	DIG, FLE, SCR, ELE, ADH, PLA	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			•			•	WOC, ADH, PLA	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	•	•	•			•	FLE, SCR, OPV, ELE, ADH, PLA	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			•			•	DIG, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	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	•		•	•	•	•	DIG, OFF, FLE , SCR, OPV, WOC, ADH, PLA, 3DP	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	•		•	•	•		OFF, FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA, 3DP	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	•		•	•	•	•	DIG, FLE, SCR, OPV, WOC, ADH, PLA	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	•			•	•	•	FLE, SCR, OPV, WOC, ELE, 3DP	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	•	•	•	•		•	DIG, OFF, FLE, SCR, OPV, ELE, ADH, PLA	Low viscosity, good flexibility
MIRAMER M220	TPGDA	2	100 A	0,2	18	62[2]	33,3	300	1,449	R	L	L	L	•	•	•		•		FLE, SCR, OPV, WOC, ADH, PLA	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	•	•	•		•	•	DIG, FLE, SCR, OPV, WOC, ADH, PLA	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	•	•		•	•	•	OFF, FLE, SCR, OPV, WOC, COM, PLA	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	•	•	•			•	FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	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		•			•	•	FLE, SCR, OPV, WOC, ADH, PLA	Soft and flexible
MIRAMER M284	PEG300DA	2	150 A	0,5	50	-8	41,6	408	1,466	R	L	L	L		•	•			•	FLE, SCR, OPV, WOC, COM, ELE, ADH, PLA	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	•	•	•				FLE, SCR, OPV, WOC, ADH, PLA	Water soluble, high flexibility and low shrinkage

◊ tin 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 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		
Tri- and Poly-Functionals																								
MIRAMER M300	TMPTA	3	50 A	0,2	110	62[2]	36,6	296	1,472	R	L	L	L	•	•		•	•		DIG, OFF, FLE, SCR, OPV, WOC, COM, ELE, PLA				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	•	•		•	•		DIG, OFF, FLE, SCR, OPV, WOC, ELE, PLA				Higher reactivity, flexibility and viscosity reduction compared to TMPTA
MIRAMER LR3130	TMP(EO)nTA	3	15 A	0,2	65	30	38,8		1,468	R	L	L	L	•	•		•	•		DIG, OFF, FLE, SCR, OPV, WOC, ELE, PLA				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			•				DIG, OFF, FLE, SCR, OPV, ADH, PLA				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	•	•	•				DIG, OFF, FLE, SCR, OPV, ELE, ADH, PLA				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	•			•			DIG, OFF, FLE, SCR, OPV, COM, ADH, PLA				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	•	•		•	•		OFF, FLE, SCR, OPV, WOC, PLA, 3DP				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	•	•		•	•	•	OFF, FLE, SCR, OPV, WOC, COM, ELE, PLA				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	•		•	•	•		DIG, OFF, FLE, SCR, OPV, COM, ADH, PLA				High reactivity, good flexibility
MIRAMER M410	DiTMPTA	4	150 A	0,1	600	98[2]	36,8	467	1,476	R	L	L	L	•	•		•	•		OFF, FLE, SCR, OPV, WOC, COM, ELE, PLA				Excellent reactivity and cross-linking
MIRAMER M4004	PPTTA	4	100 A	0,1	150	33	40,9	572	1,471	R	L	L	L	•	•		•	•		OFF, FLE, SCR, OPV, WOC, ELE, PLA				High reactivity, excellent scratch resistance
MIRAMER M600	DPHA	6	150 A	0,2	7000	35	41,1	578	1,489	R	L	L	L	•			•	•		OFF, FLE, SCR, OPV, WOC, ELE, ADH, PLA				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; 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	
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	Epoxidized 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; 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	
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; 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	
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)

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; 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	
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	L	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; 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	
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

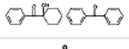
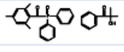
Specialities

Product	Product Data (Typical Values)							HS & Registration				Properties						Applications	Key Features
	Description	Functionality	Color	Acid Value (mg KOH/g)	Viscosity (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; 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	
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

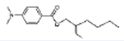
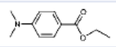
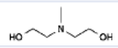
Additives

Product	Product Data (Typical Values)				HS & Registration				Properties				Applications	Key Features
	Description	Color	Acid Value (mg KOH/g)	Viscosity (mPa.s 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; 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	
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	•		•		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, OVP, 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 thioxanthones
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-morpholinpropan-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.

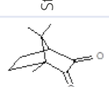
Methacrylates

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 ◊	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	❍	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

◊tin 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	Tg
		%	psi	MPa	psi	MPa		(°C)
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

Product	Product Data (Typical Values)							
	Description	Elongation at Break	Tensile Strength		Modulus		Shore Hardness	Tg
		%	psi	MPa	psi	MPa		(°C)
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 Polyester 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

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

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SWISS EXPERTISE

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