

UV/EB CURABLE RESINS INDUSTRIAL COATINGS



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RADCURE

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About allnex

allnex is a leading producer of industrial coating resins and additives for architectural, industrial, protective, automotive and special purpose coatings and inks. With manufacturing facilities and R&D centers located around the world, the allnex group offers access to a huge global network of innovation and provides

responsive, local support to our customers, helping them to quickly bring advanced coating solutions to market. Formed in 2016 by the merger of two leading resin companies, we have recently further strengthened (y)our business by becoming part of major international player PTT Global Chemical.

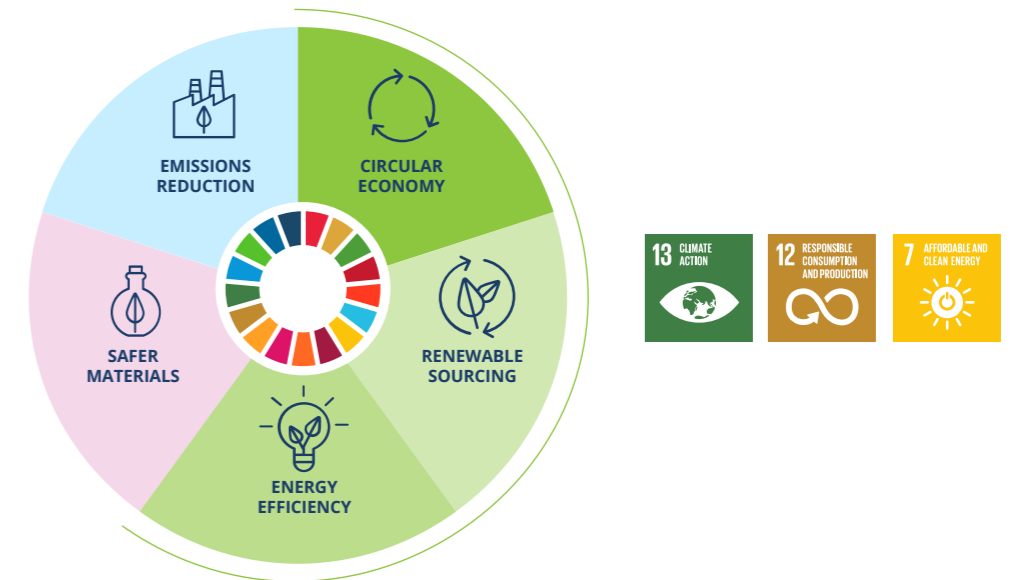
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Sustainability

A fivefold focus for a new tomorrow – the pillars of our sustainability program.

These pillars form the basis of allnex's sustainability program, which covers all aspects from product development, raw material sourcing and manufacturing to supply chain management and customer service. The pillars stand for the circularity that is at the core of all our considerations, defining both how we plan and execute our activities.



- 
Circular Economy
 We diligently explore options to limit the consumption of resources, keep them in use as long as possible, and eventually recover and recycle them at the end of service life.
- 
Renewable Sourcing
 We aim at minimal use of finite resources and strive to reduce climate impacts by looking at renewable alternatives for raw materials and the energy we use.
- 
Energy Efficiency
 We design our product and manufacturing process in a way that enables maximum efficiency in energy utilization across the product lifecycle.
- 
Safer Materials
 We are committed to making the substitution of potentially harmful chemicals by safer options one of our guiding considerations.
- 
Emissions Reduction
 We work to reduce the emissions of volatile organic solvents across the product lifecycle to protect people and the environment.

Being ECOWISE™ is the best way to be part of the solution – and that's exactly what our initiative and ECOWISE™ branded products help everyone to do. They spring from our deep commitment to a more sustainable future. They are also living proof that, with our broad range of technologies and sustainable focus, we are the ideal partner for smoothly and successfully making the transition to the solutions a more ECOWISE™ future needs.

Product Families

Diluting acrylates

As RADCURE™ formulations are normally solvent-free, diluting acrylates can be added to reduce the viscosity for better processing and to improve crosslinking. Reactivity, mechanical and chemical resistance and shrinkage increase with increasing functionality of the diluting acrylate, while the flexibility and adhesion decrease.

Polyester acrylates

Polyester acrylates cover a wide range of viscosities (low to high) and cure speeds and show a moderate to high shrinkage.

Epoxy acrylates

Epoxy acrylates are typically characterized by very fast cure, good hardness and excellent chemical resistance. In general they tend to be low in flexibility, with little elongation but they provide high gloss to the coating. A few exceptions show a good compromise flexibility/reactivity.

Acrylic acrylates

Acrylic acrylates provide a good adhesion to various substrates with a moderate cure speed and moderate to good flexibility. They are characterized by a low shrinkage and can give coatings excellent weatherability.

RAYLOK® performance products

RAYLOK® performance products is an original line of high performance systems specifically designed by allnex to achieve superior results for dedicated applications.

Radiation curable additives

allnex reactive additives were specifically developed for radiation curing applications to improve specific properties (adhesion, wetting, slip) while they become part of the network after curing.

Urethane acrylates

Urethane acrylates from allnex are the most versatile products able to provide a wide range of performance characteristics. Depending on the specific product chemistry, virtually any performance level can be achieved in terms of softness/hardness, flexibility, non-yellowing, cure speeds selecting products in a wide range of viscosities. Aliphatic urethane acrylates are, in comparison to aromatic urethane acrylates, known for their non-yellowing and outdoor performances.

Waterbased and water-compatible resins

Reasons for the success of UV waterborne radiation curing technology include outstanding performance of the coatings, very fast curing, low process costs per square metre of surface, and environmental compliance. The very low viscosity of the UCECOAT® range enables their application by different coating techniques (roller, spray, curtain and vacuum coating) and together with a low-solids content, allows a nice open-pore finish applied by spraying.

Dual Cure Resins

Dual cure resins offer unique properties as adhesion promotion on difficult substrates and curing in non-irradiated areas. allnex provides a full range of dual cure resins, including isocyanate bearing urethane acrylates as well as their hydroxy bearing combination partners.

Amine Modified Polyether Acrylates, Amine Synergists

Amine modified polyether acrylates are known for their low viscosity and good reactivity. Reactive amine synergists promote fast UV cure with less residual odour, particularly when combined with polymeric photoinitiators.

Performance Keys

	●	●●●●
Reactivity	Low	Very good
Hardness	Low	Very good
Flexibility	Low	Very good
Chemical resistance	Low	Very good
Adhesion	Low	Very good

Definitions

Acid value	Expressed in mg per KOH per g
Color	Maximum values in: <ul style="list-style-type: none"> • Gardner scale when no units are specified – range from light yellow to red defined by the chromaticities of glass standards numbered from 1 for the lightest to 18 for the darkest • Pt/Co or APHA-Hazen (A) scale – defined by specified dilutions of a platinum-cobalt stock solution, ranging from 1 at the light end of the scale to 500 at the darkest • Iodine scale - defined by specified dilutions of an iodine solution, ranging from 1 for the lightest colour to 500 for the darkest
Density	Expressed in g/cm ³
Dilution	Parts of diluent in 100 parts of product
Functionality	Theoretical value, expressed as number of double bonds per molecule
Film form. temp.	Expressed in °C
Molecular Weight (Mn)	Theoretical molecular weight
Solid content	Measured by gravimetry and expressed as the percentage of solid residue remaining after complete drying of the waterborne dispersion for 2 hours at 120°C
Particle size	Expressed in nm
pH	Measured using a conventional glass electrode equipment
Viscosity	Viscosity in milliPascal-seconds (mPa·s) at the specified temperature. Note: mPa·s = centiPoise (cP)










Abbreviations


EtAc	Ethyl acetate
BuAc	Butyl acetate
DPGDA	Dipropylene glycol diacrylate
HDDA	1,6-Hexanediol diacrylate
HEMA	Hydroxyethyl methacrylate
TMPTA	Trimethylolpropane triacrylate
TPGDA	Tripropylene glycol diacrylate
HPMA	Hydroxypropyl methacrylate
IBOA	Isobornyl acrylate
IBOMA	Isobornyl methacrylate
OTA	Acrylated glycerol derivative

Market segments












M	Metal coatings
P	Plastic coatings (different substrates)
R	Resilient Flooring Coatings
W	Wood coatings (furniture, parquet) & paper foils

Urethane acrylates

Products	Description	Dilution	Viscosity mPa·s, 25°C	Viscosity mPa·s, 60°C	Color (Gardner- Apha)	Density (Kg/L)	Molecular Weight (Mn)	Function- ality	Market Segment (W, P, M, R)	Key Features	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Aromatic urethane acrylates															
EBECRYL® 204 	Aromatic urethane acrylate	25 HDDA	17000		2	1,12	2000	3	W	General purpose, good abrasion and scratch resistance.	●●●●	●●●●	●●	●●●●	●●●●
EBECRYL® 205 	Aromatic urethane acrylate	25 TPGDA	30000		2	1,22	2000	3	W	General purpose, good abrasion and scratch resistance.	●●●●	●●●●	●●	●●●●	●●
EBECRYL® 210 	Aromatic urethane acrylate			3900	2	1,11	1500	2	W,M	General purpose, good abrasion and scratch resistance.	●	●	●●●●●	●●	●●●●●
EBECRYL® 214 	Aromatic urethane acrylate	15 HDDA	16 000		2	1,1	1500	2	W,M	General purpose, good abrasion and scratch resistance.	●	●●	●●●●	●●	●●●●
EBECRYL® 215 	Aromatic urethane acrylate	20 TPGDA	16500		2	1,1	1500	2	W,M	General purpose, good abrasion and scratch resistance.	●	●●	●●●●	●●	●●●●
EBECRYL® 220 	Aromatic urethane acrylate		28500		2	1,18	1200	6	W, P, M, R	Excellent surface hardness and chemical resistance.	●●●●●	●●●●●	●	●●●●●	●
EBECRYL® 2221 	Aromatic urethane acrylate		21000		2	1,18	1200	6	W, P, M, R	PETIA free grade exhibiting higher flexibility.	●●●●	●●●●	●●●●	●●●●	●●
EBECRYL® 4501 	Aromatic urethane acrylate	30 DPGDA	6500		200 A	1,15	2000	3.9	W, P	Tough and flexible. High abrasion and scratch resistance, especially for parquet, cork and resilient flooring.	●●●●●	●●●●	●●●●	●●●●●	●●●●
EBECRYL® 6203 	Aromatic urethane acrylate	30 DPGDA	6500		1	1,1	1500	2	W	General purpose, good abrasion resistance.	●	●●	●●●●	●●	●●●●















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Urethane acrylates

Products	Description	Dilution	Viscosity mPa·s, 25°C	Viscosity mPa·s, 60°C	Color (Gardner- Apha)	Density (Kg/L)	Molecular Weight (Mn)	Functionality	Market Segment (W, P, M, R)	Key Features	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Aliphatic urethane acrylates															
EBECRYL® 1230 	Aliphatic urethane acrylate		45000		50 A	1,08	1500	2	W, P, M, R	Used a flexibilizer, good adhesion, exterior durability	●	●	●●●●	●	●●●
EBECRYL® 1258 	Aliphatic urethane acrylate	20 HPMa		7500	75 A	1,08	5000	3	W	Good heat resistance, curing, flexibility and adhesion. Excellent abrasion resistance and stain resistance.	●	●●●●	●●●	●●	●●●
EBECRYL® 1271 	Aliphatic Urethane acrylate			4500	25 A	1,04	2700	2	W, P, M, R	Used a flexibilizer, good adhesion, exterior durability.	●	●	●●●●	●	●●
EBECRYL® 1291 	Aliphatic urethane acrylate			2000	75 A	1,16	2000	6	P	Outstanding gloss, hardness, chemical and scratch resistance.	●●●●	●●	●	●●●●	●
EBECRYL® 220 	Aromatic urethane acrylate		28500		2	1,18	1200	6	W, P, M, R	Excellent surface hardness and chemical resistance	●●●●	●●●●	●	●●●●	●
EBECRYL® 225 	Aliphatic urethane acrylate			2300	150 A	1,19	2000	10	P	High hardness and chemical resistance.	●●●●	●●●●	●	●●●●	●
EBECRYL® 242N 	Aliphatic urethane acrylate	30 IBOA		21000	2	1,1	1200	2	W, P, M	Flexible primer for metal and other substrates, good adhesion, excellent flexibility.	●	●●●	●●●●●	●	●●●●●
EBECRYL® 250 	Aliphatic urethane acrylate			3500	2	1,08	1200	2	P, M	Used a flexibilizer, good adhesion, exterior durability.	●	●	●●●●	●	●●
EBECRYL® 264	Aliphatic urethane acrylate	20 HDDA	45000		2	1,12	1500	3	W, P, R	General purpose, excellent abrasion and scratch resistance.	●●●	●●●	●●	●●●●	●●●
EBECRYL® 266 	Aliphatic urethane acrylate	25 TPGDA	35000		2	1,13	2000	3	W, P, R	Good reactivity, abrasion resistance and non-yellowing upon UV cure.	●●●	●●●	●●	●●●●	●●●
EBECRYL® 284	Aliphatic urethane acrylate	12 HDDA		2100	2	1,18	1000	2	W	Good exterior durability.	●●	●●	●●●	●●	●●●
EBECRYL® 286 	Aliphatic urethane acrylate	25 TPGDA	23000		2	1,13	1100	2	W	Good exterior durability.	●●	●●●	●●●	●●	●●●
EBECRYL® 294/25	Aliphatic urethane acrylate	25 HDDA		7000	2	1,1	2000	3	W, P, R	Good stain and abrasion resistance, excellent exterior durability, good thermal stability. Excellent matting with excimer curing.	●●●	●●	●●	●●●●	●●●
EBECRYL® 4101 	Aliphatic urethane acrylate		7000		150 A	1,13	1300	3	W, P	Tough but flexible. High abrasion resistance, especially for parquet and resilient flooring.	●●●	●●	●●●	●●	●●●
EBECRYL® 4201 	Aliphatic urethane acrylate		7000		200 A	1,13	650	3,9	W, P	Tough but flexible. Very high abrasion resistance with many test methods, especially for parquet and resilient flooring.	●●●	●●	●●	●●●	●●●
EBECRYL® 4220	Aliphatic urethane acrylate	25 TPGDA	23000		75 A	1,12	7000	3	W, P	Tough but flexible. High abrasion resistance, especially for parquet, resilient flooring and plastic.	●●●●	●●●	●●●	●●●	●●●
EBECRYL® 4265	Aliphatic urethane acrylate		750		200 A	1,12		3,4	W, P	Hard. High scratch resistance, combination product for UA to reduce viscosity and increase resistance.	●	●●●●	●	●●●●	●
EBECRYL® 4491	Aliphatic urethane acrylate	20 IBOMA	90000		75 A	1,13		2	W, P	Elastomeric grade. Extremely flexible, elongation at break > 250 %; for temporary protective coatings, improves elasticity in combination with hard resins.	●	●	●●●●	●●	●●●
EBECRYL® 4513	Aliphatic urethane acrylate		22000		100 A	1,15		3,2	W, P, R	Flexible outdoor resistance	●●●	●	●●●	●●	●●●
EBECRYL® 4587	Aliphatic urethane acrylate		1250		3,0 (Iodine)	1,13		3,4	W, P	Hard. Good chemical and scratch resistance, water thinnable.	●●	●●●	●●	●●●	●●
EBECRYL® 4666 	Aliphatic allophanate based urethane acrylate		50000		150 A	1,18		4	P	Hard and tough. High chemical and scratch resistance. Suitable for outdoor use.	●●●	●●●●	●●	●●●●	●
EBECRYL® 4680	Aliphatic urethane acrylate	20 HDDA	28000		75 A	1,14		3,8	W, P	Hard Excellent weathering resistance.	●●●●	●●●●	●	●●●●	●●
EBECRYL® 4684 	Aliphatic urethane acrylate	35 IBOA	50000		150 A	1,1		2,4	W, P, M	Extremely tough. Low shrinkage during curing, good adhesion to melamine, plastic and metal, outdoor resistance.	●	●●●	●●	●●●	●●●
EBECRYL® 4690 	Aliphatic urethane acrylate	28 HDDA	25000		75 A	1,1		4	W, P	Hard, excellent weathering resistance, 27 % renewable content, Excellent matting with excimer curing.	●●●●	●●●●	●	●●●●	●●
EBECRYL® 4738	Aliphatic allophanate urethane acrylate		40000		200 A	1,15		3	W, P, R	Relative low viscosity. Weather-stable with very good chemical and mechanical resistance.	●●●	●●●	●	●●●●	●●●
EBECRYL® 4740 	Aliphatic allophanate based urethane acrylate		8000		300 A	1,14		3	W, P, M	Low viscosity, monomer-free, high flexibility and suitable for outdoor applications.	●●	●●	●●●	●●●	●●●








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Urethane acrylates

Products	Description	Dilution	Viscosity mPa·s, 25°C	Viscosity mPa·s, 60°C	Color (Gardner- Apha)	Density (Kg/L)	Molecular Weight (Mn)	Functionality	Market Segment (W, P, M, R)	Key Features	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
EBECRYL® 4820	Aliphatic urethane acrylate	35 HDDA	3300		30 A	1,08		3	W	Good exterior durability.	●	●●●	●●	●●●●	●●●
EBECRYL® 4857 	Aliphatic urethane acrylate			2000	100 A	1,16		2	W, P, M, R	High flexibility, low viscosity and exterior durability. Due to its low Tg, it is suitable for applications requiring haptic properties (soft touch).	●●	●	●●●●	●	●●●●
EBECRYL® 4858 	Aliphatic urethane acrylate		7000		1	1,14		2	W, P	Excellent exterior durability, excellent scratch and impact resistance. High Tg.	●●●	●●●	●●	●●●	●●●●
EBECRYL® 4859 	Aliphatic urethane dimethacrylate		10000		100A	1,14		2	W	Good hardness, optical clarity, low color and good impact resistance. Regulation friendly for tin, heavy metals, and quinones.	●●	●●	●●●	●●●	●●
EBECRYL® 4900 	OH functional aliphatic urethane acrylate	40 BuAc	1500		1	1,05			P	OH functional for dual-cure technology. Suitable for thermoforming applications. High reactivity, tack-free after solvent evaporation.	●●●●	●●	●	●●●●	●
EBECRYL® 5129 	Aliphatic urethane acrylate			700	1	1,18		6	W, P	Good scratch and abrasion resistance, relatively low viscosity.	●●●●	●●●●	●	●●●●	●●
EBECRYL® 8209 	OH functional aliphatic urethane acrylate		4000		2	1,12		4	W, P	OH-functionalized urethane acrylate for dual cure application. High chemical and mechanical resistance. Relatively low viscosity.	●●●●	●●●●	●	●●●●	●
EBECRYL® 8409 	Aliphatic urethane acrylate			800	1	1,16		2	W, P, M, R	Flexible & tough, outdoor resistance.	●●	●●	●●●●	●●	●●●●
EBECRYL® 8429 	Aliphatic urethane acrylate			500	100 A	1,16		2	W, P, M, R	Flexible outdoor resistance.	●●●	●	●●●	●●	●●●
EBECRYL® 8465	Aliphatic urethane acrylate			2250	2	1,14		3	P	Balanced properties, outdoor resistance.	●●●	●●	●●●	●●●	●●
EBECRYL® 8602 	Aliphatic urethane acrylate			3000	100 A	1,16		9	P	Outstanding gloss, hardness, chemical and scratch resistance. Low energy curing.	●●●●	●●	●	●●●●	●
EBECRYL® 8813 	Aliphatic urethane acrylate	15 HDDMA		1500	100 A	1,05		2		Toughness and good flexibility. Low relative viscosity. When used in a formulation for low energy light curing, it can contribute to a good reactivity.	●●●	●	●●●	●●	●●●
EBECRYL® 8814 	Aliphatic urethane acrylate			11000	50 A	1,05		2		Toughness and good flexibility. When used in a formulation for low energy light curing, it can contribute to a good reactivity.	●●●	●	●●●	●●	●●●
EBECRYL® 8890 	Silicone Modified Aliphatic Urethane Acrylate	30 MIBK	200		2	1,01		6	W, P, M, R	High reactivity, chemical and stain resistance, excellent oil and water repellency (low surface energy coating).	●	●	●●●●●	●	●●●●●
EBECRYL® 8894 	Aliphatic urethane acrylate	20 BuAc	70000		100 A	1,07		4	P	High flexibility. Good abrasion resistance and humidity resistance.	●●●	●●	●●●	●●●	●●
EBECRYL® 8896 	Aliphatic urethane acrylate	20 BuAc	10000		1	1,06		3	P	Excellent flexibility, rubbery haptic feeling, good abrasion resistance.	●	●	●●●●	●●	●●














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Urethane acrylates for Dual-Cure

Products	Description	Dilution	Functionality Double Bonds	Functionality NCO Groups	Viscosity at 25°C approx. mPas	NCO content % on supply form	Color (Gardner-Apha)	Density (Kg/L)	Molecular Weight (Mn)	Market Segment (W, P, M, R)	Properties	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Urethane acrylates for Dual-Cure																
EBECRYL® 4141 	Aliphatic urethane acrylate		2	2	12000	12	150 A	1,13	700	W, P	Improves adhesion and coin test. High NCO content (12%).	●	●	●●●	●	●●●
EBECRYL® 4155 	Aliphatic urethane acrylate		1	2	7500	9,3	100 A	1,21		W, P	Flexible. Improves adhesion on critical substrates and has electrical insulation properties.	●	●	●●●●	●	●●●●●
EBECRYL® 4250 	Aliphatic urethane acrylate		3,4	1,4	2000	5	200 A	1,1	1100	W, P	Flexible. Low viscosity.	●	●	●●●	●	●●●
EBECRYL® 4510 	Aliphatic urethane acrylate	10 BuAc	2	2	20000	7	100 A	1,16	1200	W, P	Hard. Good stain and scratch resistance.	●●●	●●●	●	●●●	●●
EBECRYL® 4396	Aliphatic urethane acrylate		1	2,2	7500	7,5	150 A	1,12	1200	W, P	Very flexible and good adhesion.	●	●	●●●●	●	●●●●●
EBECRYL® 4397 	Aliphatic urethane acrylate		1	2,2	12000	6,8	150 A	1,1	1400	W, P	Very flexible and good adhesion.	●	●	●●●●	●	●●●●●
EBECRYL® 4765 	Aliphatic urethane acrylate	45 EtAc	4	2,5	125	4,3	100 A	1,04	2300	P	Hard. For dual-cure technology; improves scratch and chemical resistance.	●●●	●●●	●●	●●●	●●
EBECRYL® 4950 	Aliphatic urethane acrylate	20 BuAc	3	2	1700	6,2	100 A	1,1		W, P	Excellent stain resistance and hardness. Used for thermoforming applications. 20% BuOAc. High reactivity.	●●●	●●●●	●	●●●●	●


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Polyester acrylates

Products	Description	Dilution	Viscosity mPa·s, 25°C	Color (Gardner- Apha)	Density (Kg/L)	Acid value	Molecular Weight (Mn)	Function- ality	Market Segment (W, P, M, R)	Key Features	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Polyester acrylates															
EBECRYL® 780 	Acid functional polyester methacrylate	30% 2-methoxy-1-propanol	15000	max5		140	3000	~8	M,P	Physically drying. Adhesion on metal and vacuum metallized surfaces.	●●	●●●●	●●	●●	●●●●
EBECRYL® 800	Polyester acrylate		14000	2	1,15	20	780	4	W, P	General purpose – low viscosity polyester acrylate.	●●	●●●	●●	●●●●	●●●
EBECRYL® 810 	Polyester acrylate		500	2	1,09	25	1000	4	W, P	Reactive diluting resin. Suitable for white pigmented systems.	●●	●●	●●	●●●	●
EBECRYL® 830 	Polyester acrylate		50000	3	1,18	30	1500	6	W, P	Very good reactivity and scratch resistance.	●●●	●●●●	●	●●●●	●
EBECRYL® 837 	Multifunctional polyester acrylate		800	3	1,14	12	2700	6		Good cure, hardness and scratch resistance .	●●●●	●●●●	●●	●●●●	●●
EBECRYL® 853 	Polyester acrylate		80	200A	1,1	1	470	3	W	Low viscous trifunctional polyester acrylate, having low irritation, low odor and good flexibility.	●	●●	●●●	●●	●●●
EBECRYL® 854	Polyester acrylate		30000	2	1,2	20	600	3,1	W	All-round polyester acrylate with well-balanced properties for use in wood coatings.	●●●	●●	●●●	●●●	●●●●
EBECRYL® 884	Polyester acrylate		25000	5	1,19	20	1250	3	W	Excellent flexibility and abrasion resistance for furniture and parquet floor.	●●●	●●●	●●●	●●●	●●
EBECRYL® 892 	Tetra-functional polyester acrylate		140	2	1,15	1		4	W, P	Reactive diluting resin. Good adhesion and hardness.	●●	●●●	●●	●●●	●●●
EBECRYL® 895 	Dipentaerythritol Penta/Hexaacrylate		8000	1	1,16	10	520	5,5	W	Very good scratch resistance, low viscosity and low migration.	●●●●	●●●●	●	●●●●	●
EBECRYL® 898 	Polyester acrylate oligomer		3500	white opaque	0,8	20	1000	4		Co-binder to extend the matting effect of a silica containing formulation.	●●	●●	●●●	●●	●●●
EBECRYL® 1016 	Polyester acrylate		400	2	1,14	20	1000	4		Reactive diluting resin. Suitable for white pigmented systems.	●●	●●	●●	●●●	●●
EBECRYL® 1885 	Polyester acrylate		34000	5	1,19		1350	3	N	Excellent flexibility and abrasion resistance for furniture and sealer for parquet floor.	●●●	●●●	●●●	●●●	●●●
EBECRYL® 4744 	Polyester acrylate		5000	300 A	1,15	<3	1000	3	W, P	Tough but flexible. Low viscosity, good balance between hardness and flexibility. Hydroxy groups containing type for dual-cure formulations (80 mg KOH/g).	●●	●●	●●●	●●●	●●
EBECRYL® 5849 	Bio-sourced polyester acrylate		10000	6	1,27	<10	350	2	W, P	Reactive, hard, medium flexible bio-based coating.	●●●●	●●●	●●●	●●●	●●●
EBECRYL® R1872 	Recycled PET based polyester acrylate		6500	3	1,1	15	1300	2,5		Flexible sealer. High reactivity. Recycled and renewable content.	●●●	●●	●●●	●●	●●●

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Polyesters in diluting monomers

Products	Description	Dilution	Viscosity mPa·s, 25°C	Color (Gardner- Apha)	Molecular Weight (Mn)	Acid Value	Density (Kg/L)	Market Segment (W, P, M, R)	Properties	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Unsaturated polyesters in diluting monomers														
EBECRYL® 4175	Polyester resin	25 DPGDA	15000	2,0 (Iodine)	2300	<20	1,2	W	Hard, high gloss, clear and pigmented self-sealer with good adhesion, sandability and scratch resistance topcoat	●●	●●●	●	●●●	●●●●
EBECRYL® 4381	Polyester resin	30 DPGDA	10000	3,0 (Iodine)	2200	<14	1,19	W	Hard, high gloss, clear and pigmented self-sealer with good adhesion, sandability and scratch resistance topcoat. Improved reactivity.	●●	●●	●●	●●●	●●●
Saturated polyesters in diluting monomers														
EBECRYL® 524	Polyester resin	30 HDDA	60000	250A	1000	30	1,22	P	Used as adhesion primer and binder on difficult substrates.	●	●●●	●●●	●	●●●
EBECRYL® 522 	Polyester resin	40 TPGDA	40000	200A	1000	25	1,21	P	Used as adhesion primer and binder on difficult substrates.	●	●●	●●●	●	●●●


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Epoxy acrylates

Products	Description	Dilution	Viscosity mPa·s, 25°C	Viscosity mPa·s, 60°C	Color	Density	Acid value	Function- ality	Market Segment (W, P, M, R)	Key Features	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Epoxy acrylates															
EBECRYL® 600	Epoxy acrylate			3000	2	1,17	2	2	W, P, M, R	General purpose epoxy resins: Good surface hardness. High reactivity. Good water resistance.	●●●	●●●●	●	●●●●	●
EBECRYL® 600/30DP	Epoxy acrylate	30 DPGDA	4100		1	1,13	2	2	W, P, M, R	General purpose epoxy resin.	●●	●●	●●	●●	●●●
EBECRYL® 600/35OT	Epoxy acrylate	35 OTA 480	11500		2	1,15	2	2	W, P, M, R	Good pigment wetting.	●●●	●●●	●	●●●	●●
EBECRYL® 604	Epoxy acrylate	20 HDDA	8500		2	1,13	2	2	W, P, M, R	Outstanding water resistance.	●●●	●●●	●	●●●	●●●
EBECRYL® 605	Epoxy acrylate	25 TPGDA	7500		2	1,17	2	2	W, P, M, R	General purpose – epoxy resin.	●●	●●	●●	●●	●●
EBECRYL® 605/20	Epoxy acrylate	20 TPGDA	18000		2	1,17	2	2	W, P, M, R	General purpose – epoxy resin.	●●	●●	●●	●●	●●
EBECRYL® 605/40	Epoxy acrylate	40 TPGDA	1650		2	1,11	2	2	W, P, M, R	General purpose – epoxy resin.	●●	●●	●●	●●	●●
EBECRYL® 609	Epoxy acrylate	15 BuAc	3250		2	0,99	2	2	W, P, M, R	Resin for solvent based applications.	●●●	●●●●	●	●●●●	●●
EBECRYL® 648	Epoxy acrylate	25 OTA 480	50000		3	1,14	2	2	W, P, M, R	Excellent pigment wetting.	●●●	●●●	●	●●●	●●
EBECRYL® 3105	Modified epoxy methacrylate			600	5	1,18	5	2	W, P, M, R	Excellent adhesion.	●	●●	●●●●	●●	●●●●
EBECRYL® 3300	Modified epoxy acrylate	35 DPGDA	1100		7	1,14	3	2	W, P, M, R	Outstanding adhesion to metal, good compromise hardness/flexibility and excellent corrosion resistance.	●●●●	●●●	●●	●●	●●●
EBECRYL® 3416	Epoxy novolac acrylate	65 TPGDA	18000		3	1,12	15	4	W, P, M, R	High temperature resistance. High hardness.	●●●●	●●●	●	●●●●	●●
EBECRYL® 3639	Modified epoxy acrylate	30 DPGDA	15500		3	1,15	2	2	W, P, M, R	Flexible and high reactive wood sealer.	●●●●	●●●	●●●●	●●●	●●●
EBECRYL® 3700/30TP	Epoxy acrylate	30 TPGDA	5700		3	1,17	3	2	W, P, M, R	General purpose epoxy resin - allowed to be used with isocyanates.	●●	●●	●●	●●	●●
EBECRYL® 3701	Modified epoxy acrylate			8000	3	1,14	6	2	W, P, M, R	Enhanced adhesion to plastics.	●●	●●	●●●●	●●	●●●●
EBECRYL® 3703	Modified epoxy acrylate			4250	6	1,14	5	2	W, P, M, R	Enhanced adhesion to plastics. Fast UV cure response.	●●●●	●●●●	●●●●	●●●	●●●●
EBECRYL® 3708	Modified epoxy acrylate			3500	4	1,17	4	2	W, P, M, R	High flexibility, elongation and impact resistance.	●	●●●	●●●●	●●●	●●●●
EBECRYL® 5848	Epoxidized soya bean oil acrylate		20000		8	1,03	15	3	W, P, M, R	Good pigment wetting - high renewable content.	●	●	●●●	●	●
EBECRYL® 6040	Epoxy acrylate	25 OTA 480	25000		2	1,14	2	2	W, P, M, R	General purpose. Good pigment wetting.	●●●	●●●	●	●●●	●●
EBECRYL® 6048	Epoxy acrylate	40 OTA 480	7000		5	1,13	3	2	W, P, M, R	General purpose. Good pigment wetting.	●●●	●●	●●	●●●	●●
EBECRYL® 6000	Epoxy acrylate			3150	2	1,17	2	2	W, P, M, R	General purpose epoxy resin - renewable content.	●●●	●●●●	●	●●●●	●
EBECRYL® 6008/48	Epoxy acrylate	48 OTA 480	3500		1	1,10	2	2	W, P, M, R	Good pigment wetting - renewable content.	●●●	●●	●●	●●●	●●
EBECRYL® 611	Epoxy methacrylate			3000	1	1,16	5	2	W, P, M, R	High temperature resistance. High hardness.	●●	●●●●	●	●●●●	●●
EBECRYL® 606	Epoxy acrylate	45 EBECRYL® 160	4500		2	1,11	2	2	W, P, M, R	General purpose – epoxy resin.	●●●	●●●	●	●●●	●●
EBECRYL® 608	Epoxy acrylate	27 OTA 480	25000		2	1,15	2	2	W, P, M, R	Good pigment wetting.	●●●	●●	●●	●●●	●●
EBECRYL® 3748/20	Epoxy acrylate	20 OTA 480		1200	2	1,15	1	2	W, P, M, R	Good pigment wetting.	●●●	●●	●●	●●●	●●

Acrylic acrylates

Products	Dilution	Viscosity mPa·s, 25°C	Viscosity mPa·s, 60°C	Color (Gardner-Apha)	Market Segment (W, P, M, R)	Key Features	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Acrylic acrylates – Acrylic oligomer											
EBECRYL® 303	45 HDDA	500			W, P, M, R	Excellent primer for difficult substrates.	●	●	●●●	●	●●●●
EBECRYL® 741	45 HDDA	3750		4	W, P, M, R	Excellent primer for difficult substrates.	●	●	●●●	●	●●●●
EBECRYL® 745	23 TPGDA, 23 HDDA	20000		3	W, P, M, R	Excellent primer for difficult substrates.	●	●	●●●	●	●●●●
EBECRYL® 767	32 IBOA	175000	8500	3	W, P, M, R	Excellent primer for difficult substrates.	●	●	●●●●	●	●●●●
EBECRYL® 1200	45 BuAc	3000		5	P	Physically drying. Suitable for exterior and topcoat application. OH functional, especially recommended for dual-cure application.	●●●●	●●●●	●●	●●●●	●●●
EBECRYL® 1205	48 BuAc	1000		60A	P	Physically drying. Suitable for exterior and topcoat application. OH functional, especially recommended for dual-cure application.	●●●	●●●	●●●	●●●	●●●●

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Amine modified polyether acrylates and amine synergists

Products	Description	Functionality	Viscosity mPa·s, 25°C	Color (Gardner)	Amine value (mg KOH/g)	N%	Key Features	Reactivity	Flexibility	Chemical resistance	Adhesion	Pigment Wetting
Amine modified co-initiator												
EBECRYL® P115	Tertiary Amine Co-initiator	n.a.	20	2	236	6	Highly efficient co-initiator.	●●●●	●●	●●●	●	●
EBECRYL® P116	Tertiary Amine Co-initiator	n.a.	20	2	236	6	Highly efficient co-initiator.	●●●●	●●	●●●	●	●

Products	Description	Viscosity mPa·s, 25°C	Color (Gardner-Apha)	Density (Kg/L)	Molecular Weight (Mn)	Amine value (mg KOH/g)	Functionality	N%	Market Segment (W, P, M, R)	Key Features	Reactivity	Hardness	Flexibility	Chemical resistance	Adhesion
Amine modified polyether acrylates															
EBECRYL® 80	Amine modified polyether	3000	200 A	1,11	1000	60	4	1,5	W	Provides excellent reactivity in a formulation.	●●●●	●●	●●●	●●	●●●
EBECRYL® 81	Amine modified polyether	100	2	1,08	600	56	2,5	1,4	W	Good reactivity combined with good diluting power.	●●	●●●	●●	●●	●●
EBECRYL® 83	Amine modified polyether	500	2	1,11	1000	40	3,5	1	W	Very good reactivity, low residual odor.	●●●	●●●	●●	●●●	●●
EBECRYL® 7100	Amine Functional Acrylate Co-initiator	1200	4	1,1		140	2	3,5	W	Highly efficient co-initiator, excellent adhesion to plastic substrates; can be used as a resin.	●●●	●●●●	●	●●●	●●●●

Waterbased and water-compatible resins

Products	Description	Solid content (%)	Viscosity mPa·s, 25°C	pH	Max. average particle Size	Tack-free before cure (Y/N)	Market Segment (W, P, M, R)	Key Features
Waterbased resins								
UCECOAT® 2804 	Aliphatic polyurethane acrylate dispersion	35	<200	6,5 - 8,0	<150	Y	P	Very good adhesion on plastics and metal. Good compatibility and suitable for low migration applications. Tack-free after water evaporation.
UCECOAT® 2807 	Aliphatic polyurethane acrylate dispersion	35	<200	7,0 - 8,5	<100	Y	P	High flexibility and good adhesion on plastics. Used for artificial leather applications.
UCECOAT® 6560 	Aliphatic urethane acrylate solution in water	50	3400		NA	N	W	Especially recommended as wood primer. High wood wetting, adhesion and flexibility. Resoluble in water before UV cure.
UCECOAT® 6570 	Aliphatic urethane acrylate solution in water	95	6000 (60°C)		NA	N	W	High wood wetting, adhesion and flexibility. Resoluble in water before UV cure.
UCECOAT® 7156 	Aliphatic polyurethane acrylate dispersion	50	3300 (23°C)	6,4 - 7,8	<150	N	W	High solid content dispersion with high wood wetting, adhesion, chemical resistance, flexibility and hardness, low yellowing. Resoluble in water before UV cure.
UCECOAT® 7230 	Aliphatic polyurethane acrylate dispersion	45	<200	6,0 - 8,0	<100	N	P	Hardcoat with ultimate cured coating resistance. Can serve as a binder modifier to increase performance of other waterborne resins. High solid content.
UCECOAT® 7240 	Aliphatic polyurethane acrylate dispersion	35	<200	6,0 - 8,0	<150	N	P	Excellent adhesion to most plastics. Good humidity and chemical resistance.
UCECOAT® 7520 	Aliphatic polyurethane acrylate dispersion	40	<200	6,5 - 8,0	<150	Y	W	Easy to use topcoat for clear & white pigmented coating. Low yellowing directly after cure. High hardness. Good compatibility. Easy matting.
UCECOAT® 7630 	Aliphatic polyurethane acrylate dispersion	41	<200	6,5 - 8,0	<150	Y	W, P	Top coat with very high reactivity for both clear & pigmented systems. Best-in-class intercoat adhesion. Excellent stain & solvent resistance. Very high hardness & scratch resistance.
UCECOAT® 7655	Aliphatic polyurethane acrylate dispersion	35	<200	7,0 - 8,5	<150	Y	W, P, R	High stain resistance, scratch and reactivity in white pigmented and clearcoat systems.
UCECOAT® 7674 	Aliphatic polyurethane acrylate dispersion	40	<200	6,4 - 7,8	<150	N	W	Outstanding wetting of wood surfaces, imparting warmth and richness to the appearance of the wood. Good stain and chemical resistance.
UCECOAT® 7690 	Aliphatic polyurethane acrylate dispersion	35	<200	7,0 - 8,5	<100	Y	W, P, R	Outdoor resistance, good flexibility and chemical resistance.
UCECOAT® 7700 	Aliphatic polyurethane acrylate dispersion	35	<200	7,0 - 8,5	<150	Y	W, P	Very high hardness and scratch resistance (nail, pencil, coin), high stain and blocking resistances for high-end wooden furniture top coats, incl. pigmented systems.
UCECOAT® 7717 	Aliphatic polyurethane acrylate dispersion	40	<250	6,0 - 7,5	<150	N	W	High "Anfeuerung" primer. High gloss.
UCECOAT® 7733 	Aliphatic polyurethane acrylate dispersion	38	<200	7,0 - 8,5	<150	N	W, P	Outstanding stain resistances both in clear and white pigmented coatings, while still giving flexibility.
UCECOAT® 7738 	Aliphatic polyurethane acrylate dispersion	38	<200	7,0 - 8,5	<200	Y	W	Topcoat for clear & white pigmented coating on wood. Outstanding balance between hardness & flexibility. Excellent (white) pigment wetting that allow to combine high gloss without defects, while maintaining a high pigment coverage. Pictogram free.
UCECOAT® 7771	Aliphatic polyurethane acrylate dispersion	35	<200	6,5 - 8,0	<150	Y	W	Good stain, solvent and mechanical resistance.
UCECOAT® 7774	Aliphatic polyurethane acrylate dispersion	39	<250	7,0 - 8,5	<150	Y	W, P, R	Recommended for PVC resilient flooring and topcoat on wood, high stain resistance and hardness.
UCECOAT® 7788 	Aliphatic polyurethane acrylate dispersion	40	<500	7,0 - 8,5	<150	Y	W, R	Versatile resin with good stability and good balance of coating properties, wide compatibility with various resins and additives.
UCECOAT® 7850 	Aliphatic polyurethane acrylate dispersion	35	<200	7,5	<100	Y	W	Versatile resin, recommended for resilient flooring and coatings on wood, good stain resistance.
UCECOAT® 7856 	Aliphatic polyurethane acrylate dispersion	45	<500	6,5 - 7,5	<150	N	W	For high gloss and mirror image coatings on wood.
UCECOAT® 7999 	Aliphatic polyurethane acrylate dispersion	35	<200	7,0 - 8,5	<100	Y	W, P	22% bi-carbon offering high hardness, durability and chemical resistance.

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RAYLOK® performance products

Products	Description	Viscosity mPa·s, 25°C	Viscosity mPa·s, 60°C	Color (Gardner)	Density (Kg/L)	Molecular Weight (Mn)	Functionality	Market Segment (W, P, M, R)	Key features
RAYLOK®* 1622	Oil modified acrylate	520		7	0,98		3	W	Oil modified binder, UV-curing with 80W/cm lamps.
RAYLOK® 1722	Phosphorus based acrylated oligomer		7100	2,5	1,1	3000	2	W	Halogen-free flame retardant oligomer, used in intermediate coats, superior clarity of the cured film.
RAYLOK® 5021	Aromatic urethane acrylate		12500	2	1,14		2	P	For electrical sleeves – excellent flexibility, electrical and thermal insulating properties.

* RAYLOK® UV curable performance products

Diluting acrylates

Products	Description	Viscosity mPa·s, 25°C	Color (Gardner- Apha)	Density (Kg/L)	Acid value	Market Segment (W, P, M, R)	Key Features	Performance of Material					Performance in Product group					
								Reac- tivity	Hard- ness	Flexi- bility	Chemical resis- tance	Ad- hesion	Reac- tivity	Hard- ness	Flexi- bility	Chemical resis- tance	Ad- hesion	
Monofunctional								Diluting acrylates (1)					Family (2)					
EBECRYL® 110	Oxyethylated phenol acrylate	20	200A	1,12	1	P	Low odor monoacrylate; good adhesion onto non-polar substrates.	●	●●	●●●●	●●	●●●●	●●	●●	●●●	●●●	●●●	●●●
EBECRYL® 113	Monofunctional epoxy acrylate	120	1	0,97	1	W, P	Low irritant, low odor. Improves flexibility and adhesion.	●	●●	●●	●●	●●●	●●●	●●●	●●●	●●●	●●●	●●
EBECRYL® 114	Phenoxyethyl acrylate	10	200A	1,1	1	P	Excellent adhesion to plastics and metal.	●	●●	●●●●	●●	●●●●	●●●	●●●●	●●●●	●●●●	●●●	●●●
EBECRYL® IBOA	Isobornyl acrylate	9	100A	0,98	1	W, P	High Tg. High renewable content.	●●●	●●●	●●	●●●	●●	●●●	●●●	●●	●●●	●●	●●
EBECRYL® 117	Hydroxy functional aliphatic monoacrylate	70	100A		1	W, P	Low odor, high flexibility, reactive through hydroxyl group	●	●	●●●●	●	●●●	●●	●●	●●●	●●	●●●	●●●
Difunctional																		
EBECRYL® 11	Polyethylene glycol 600 diacrylate	155	3	1,11	17	W	100% water soluble. Good Flexibility.	●●	●●	●●●	●●	●●●	●●	●●	●●●	●●	●●●	●●●
EBECRYL® 130	Tricyclodecanediol diacrylate	160	2	1,01	1	P	High reactive diluting oligomer characterised by high Tg and low shrinkage.	●●	●●●	●●	●●●	●●●●	●●	●●●	●●	●●●	●●●	●●●●
EBECRYL® 145	Propoxylated neopentyl glycol diacrylate	20	1	1,01	1	P	Aliphatic di-functional acrylate of low surface tension.	●●	●●	●●●	●●	●●●	●●	●●	●●●	●	●●●	●●●
EBECRYL® MPDDA	Methylpropanediol diacrylate	6	100A	1,02	1	W, P	High diluting power, good weathering properties, low irritant	●●	●●	●●	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●●
DPGDA	Dipropylene glycol diacrylate	10	100A	1,06	0,4	W, P	High diluting power.	●●	●●	●●	●●	●●●	●●	●●●	●●●	●●	●●●	●●●
HDDA	1,6-Hexanediol diacrylate	6	40A	1,03	0,4	W, P	High diluting power, good weathering properties. Very good adhesion on plastics.	●●	●●	●●	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●●
TPGDA	Tripropylene glycol diacrylate	10	50A	1,05	0,4	W, P	High diluting power.	●●	●●	●●	●●	●●●	●●	●●	●●●	●	●●●	●●●
Trifunctional																		
EBECRYL® 160	Trimethylolpropane ethoxy triacrylate	80	60A	1,09	0,4	W, P, M, R	Good compromise of properties.	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●	●●●	●●●	●●●
EBECRYL® 853	Trimethylolpropane ethoxy triacrylate	80	200A	1,09	1	W, P	Good compromise of properties with low free TMPTA	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●	●●●	●●●	●●●
EBECRYL® 14	Trimethylolpropane ethoxy triacrylate	300	100A	1,1	5	W, P	High flexibility, good adhesion, low free TMPTA	●●	●	●●●●	●	●●	●●	●	●●●●	●	●●●●	●●●●
OTA 480	Glycerol propoxylated triacrylate	90	60A	1,08	0,4	W, P, M, R	Good compromise of properties, good pigment wetting.	●●●	●●●	●●	●●●	●●	●●	●●	●●●	●●●	●●●	●●●
TMPTA	Trimethylolpropane triacrylate	115	50A	1,11	0,4	W	Good surface cure and scratch resistance.	●●●●	●●●●	●	●●●●	●	●●●●	●●●●	●	●●●●	●	●●●●
TMPTMA	Trimethylolpropane trimethacrylate	60	100A	1,07	1	W, P	Low shrinkage, good adhesion	●●	●●●	●●	●●●	●●●	●●	●●●	●●●	●●●	●●●	●●●●
Multifunctional																		
EBECRYL® 40	Polyether tetraacrylate	160	1	1,15	3	W, P, M, R	Low shrinkage.	●●	●●	●●●	●●●	●●●	●●	●●	●●●	●●●	●●●	●●●
EBECRYL® 140	Polyester acrylate	1000	400A	1,1	10	W, P	Good reactivity and hardness.	●●●	●●●	●●	●●●	●●	●●●	●●●	●●	●●●	●●●	●●
DPHA	Dipentaerythritol penta / hexaacrylate	16000	1	1,18	10	W	Very good scratch resistance.	●●●●	●●●●	●	●●●●	●	●●●●	●●●●	●	●●●●	●	●●●●
PETIA	Mixture of pentaerythritol tri- and tetraacrylate	1100	200A	1,18	10	W	High degree of crosslinking.	●●●●	●●●●	●	●●●●	●	●●●●	●●●●	●	●●●●	●	●●●●

Additives for adhesion, LED, Nano & Polymeric photo initiator

Additive name	Dosage	WB SB 100%	Characteristics	% Active content	Monomer or/ and solvent content	Description
Specialty Additives: Adhesion promoters						
EBECRYL® 168	0,1 – 5,0% total	SB & 100%	Acid modified methacrylate	100%		EBECRYL® 168 is a methacrylate modified acidic adhesion promoting agent designed as a modifier for ultraviolet (UV) and electron beam (EB) curable coatings on metals.
EBECRYL® 171	0,1 – 5,0% total	SB & 100%	Aacid modified methacrylate	100%		EBECRYL® 171 is a methacrylate modified acidic adhesion promoting agent designed as a modifier for ultraviolet (UV) and electron beam (EB) curable coatings.
EBECRYL® 367	1-15%	100% (SB)	Polyester acrylate	100%		Excellent adhesion on corona treated polyolefin substrates.
ADDITOL® VXL 4950	Flash primer	all	Halogenated polyolefin	43%	Xylene, naphtha	Flash primer for plastic substrates; recommended dilution 1:8 in aromatic solvents.
LED Booster						
EBECRYL® LED 102	up to 25% total	SB & 100%	Mercapto modified polyester acrylate resin	100%		EBECRYL® LED 102, a mercapto modified polyester acrylate resin, can be added as a co-resin to UV curable formulations. EBECRYL® LED 102 transforms formulations into UV LED, UVA, or low energy curable systems by providing better surface cure. In addition, this co-resin can also be used to obtain better surface cure in high energy cure formulations. EBECRYL® LED 102 provides better surface cure by mitigating oxygen inhibition of the free radical process.
EBECRYL® LED 03	5 – 20% total	SB & 100%	Amine modified polyether acrylate oligomer	100%		UV/EB cured products based on EBECRYL® LED 03 are characterized by the following performance properties: Good (surface) cure response, good flexibility, adhesion promotion, high gloss, low odor, low migration potential. In addition, this effect is also seen in high energy cure formulations. The improved surface cure is obtained by mitigating oxygen inhibition of the free radical process and/or by being an amine synergist for Norrish type II photoinitiators.
EBECRYL® LED 04	5 – 20%	SB & 100%	Acrylated polyamine	100%		Provides improved surface cure in LED. EBECRYL® LED 04 can also be used in offset inks applications as a replacement of aminobenzoate synergists.
Nano Additive						
MODAFLOW® NSR 100	1,5%-5% solid on solid	SB & 100%	Solvent based dispersion of modified nanosilica	35%	MEK	Concentrated dispersion of nanosilica for improving scratch resistance and Easy to Clean properties of automotive OEM, vehicle refinish, plastic and wood clearcoats as well as pigmented topcoats.

Products	Description	Type	State	Non-yellowing	Key Features
Photoinitiators					
EBECRYL® P39	Polymeric Benzophenone Derivative.	H-abstraction	Liquid	Yes	Photoinitiator for low odor UV coatings.

Wetting and Dispersing Additives

Additive name	Dosage	WB SB 100%	Characteristics	% Active content	Monomer or/and solvent content	Description
Polyester acrylates						
EBECRYL® 331	0,5 - 5,0% inorg. Pigment / extender	SB & 100%	Low molecular wetting additive with phosphoric acid modification	65%	OTA 480	Special pigment wetting additive for 100% UV formulations. It improves colour development and pigment stabilization through electrical charging. Recommended for high gloss formulations.
ADDITOL® XL 6577	2.5 - 10% on pigment / extender 15-60% on matting agent	SB & 100%	Copolymer with acidic groups	52%	MPAC and Solvent naphtha 150/180	Excellent dispersant for SB and 100% UV paints and combined with inorganic pigments / filler preparations. Enables highest pigment loading with low viscosity.
ADDITOL® XL 6592	1,0 – 5% inorg. 5 – 30% org. pigment	all	High molecular weight polymer; nonionic	100%		High efficient, high molecular weight dispersing additive for all types of pigment. Recommended for direct grinding as well as for binder free pigment concentrates.
ADDITOL® XL 6521	3,0 – 10% inorg. 15 – 60% org. pigment	SB & 100%	Modified block copolymer; high molecular; cationic	60%	MPAC	Powerful, high molecular weight dispersing additives for very difficult wettable pigments. Especially recommended for all carbon black pigments in order to achieve perfect color properties and extreme high gloss.
ADDITOL® VXW 6394	10 – 30% inorg. 30 – 75% org. pigment	WB	High molecular weight polymer; nonionic	40%	Water	Very sufficient, high molecular weight dispersing additive for all types of pigment. Due to its non ionic polymer structure it is highly recommended in formulations containing sensitive resins. Further it can be used for the production of highly loaded, binder free pigment concentrates.
ADDITOL® XW 6588	3,0 – 10% inorg. 15 – 50% org. pigment	WB	Nonionic, polymeric low ion migration (LIM) dispersant	48%	Water	High molecular weight dispersing additive for all types of pigment. Due to its non ionic polymer structure it is highly recommended in formulations containing sensitive resins. It is recommended for both, direct grinding and pigment concentrates.

Flow and Leveling Additives

Additive name	Dosage	WB SB 100%	Characteristics	% Active content	Monomer or/ and solvent content	Description
Silicone containing – silicone free						
EBECRYL® 341	0,5-3% total	SB & 100%	Silicone free master batch	80%	TPGDA	Silicone free slip additive master batch. Improve slip between cured coatings and provide good intercoat adhesion and glueability. Can be used to avoid show through in shrink sleeves.
EBECRYL® 350	0,5 – 3% total	SB & 100%	Silicone diacrylate	100%		EBECRYL® 350 is a silicone diacrylate material which contributes slip, substrate wetting and flow properties when used as an additive in formulations cured by ultraviolet light (UV) or electron beam (EB). Cured films containing EBECRYL® 350 will exhibit a smooth, tack free surface, with good blocking resistance. Because of its acrylate functionality, the silicone cures into the polymeric backbone, thus eliminating the migration that free silicones often display in coatings.
EBECRYL® 1215	0,5 – 3% total	SB & 100%	Modified silicone oil derivate	100%		Silicone modified oil derivative that is improving slip and scratch resistance in EB cure coatings.
EBECRYL® 1360	0,5 – 3% total	SB & 100%	Silicone hexa-acrylate material	100%		EBECRYL® 1360 is a silicone hexa-acrylate material which contributes slip, substrate wetting and flow properties when used as an additive in formulations cured by ultraviolet light (UV) or electron beam (EB). Cured films containing EBECRYL® 1360 will exhibit a smooth, tack free surface, with good blocking resistance. Because of its acrylate functionality, the silicone cures into the polymeric backbone, thus eliminating the migration that free silicones often display in coatings.
EBECRYL® 1365	1-10%	SB & 100%	Silicone hexa-acrylate material	100%		High compatibility resulting in clear films. Provides anti-stain and easy-to-clean properties. It can be used as a processing agent in matt and excimer curable formulations, facilitating a uniform film creation.
MODAFLOW® 2100	0,1 – 1,0 % total	SB & 100%	Acrylic copolymer; medium molecular weight	100%		Medium molecular weight, highly efficient flow modifier. Good compatibility and easy incorporation, fast mode of action. Recommended also in clear coat applications.
MODAFLOW® 9200	0,1 – 0,5% total	SB & 100%	Modified acrylic copolymer; low molecular weight; crosslinkable	100%		Low molecular weight, high efficient and all solventborne and 100% high end UV applications flow modifier. It reduces film defects and strongly increases gloss levels. Recommended for all solventborne high end applications.
MODAFLOW® LAMBDA	0,1 – 0,5% total	SB & 100%	Hydroxyl functional acrylic-silicone polymer	100%		Highly efficient, hybrid flow promoter for improved surface characteristics such as gloss, DOI, brilliancy, anti-orange peel effect. Contains no free silicone due to chemical anchoring.
MODAFLOW® AQ 3025	1,0 – 2,0% total	WB	Acrylic copolymer; neutralized by amine; silicone-free	25%	Water	Medium molecular weight flow and leveling additive. It supports pigment wetting and allows a fast degassing process.
ADDITOL® XL 482	0,1-1%	SB & 100%	Acrylic flow promoter	100%		Medium molecular weight, highly efficient flow modifier. Good compatibility and easy incorporation, fast mode of action. Recommended also in clear coat applications.
ADDITOL® XL 121 N	0,1 – 0,5% total	SB & 100%	Modified silicone	14%	Toluene	Silicone leveling additive that strongly increases slip and scratch resistance. Further it improves material flow.
ADDITOL® XL 123N	0,05 – 0,5 % total	all	Modified silicone	50%	Naphtha	Silicone leveling additive to improve slip and scratch resistance. It has degassing properties and is thermostable up to 400°C.
ADDITOL® VXL 4930N	0,05 – 0,3% total	all	Polyether-modified silicone	40%	Ethylhexanol	Universal, silicone leveling additive with very good compatibility. It is very well balanced in order to improve spray mist absorption, orange peel, cratering and leveling. Highly efficient and not foam stabilizing.
ADDITOL® XW 6580	0,05 – 0,5% total	all	Silicone tenside	100%		Special silicone tenside with very strong influence on surface tension and excellent substrate wetting performance. It is not foam stabilizing and does not show problems in recoatability.
ADDITOL® XW 6586	0,05 % to 1% total	all	Organomodified polysiloxane type	100%		Multipurpose silicone additive for improved surface quality and substrate wetting quality, substrate wetting and slip.

Rheology Modifiers

Additive name	Dosage	WB SB 100%	Characteristics	% Active content	Monomer or/and solvent content	Description
Rheology modifiers						
ADDITOL® VXW 6360	0,1 – 3,0% total	WB	Polyurethane thickener	30%	2-(2-Butoxyethoxy)ethanol	Associative thickener to control rheology and flow. It improves applicability by roller or brush. Easy to incorporate.
ADDITOL® VXW 6388	0,1 – 3,0% total	WB	Polyurethane thickener	35%	2-(2-Butoxyethoxy)ethanol	Associative thickener to control rheology at low shear stress. Recommended for spray application. Excellent against sedimentation and sagging.
ADDITOL® VXW 6387	0,1 – 5,0% pigment	all	Special fatty acids; amine neutralized; silicone free	60%	Methoxypropanol	Rheology modifier to prevent pigment sedimentation, sagging and storage stability.
ADDITOL® XW 6536	0,2 -0,8% total	WB	Special organic activated clay	37%	Methoxypropanol	Special rheology modifier with extremely fast viscosity recovery. Recommended for all high wet film thicknesses e.g. in case of airless application. Prevents sagging and settling at zero and low shear stress sufficiently.
ADDITOL® XL 280	5,0 – 10,0% pigment	SB & 100%	Special modified montmorillonite clay	36%	Solvent naphtha (light arom.)	Rheology modifier to prevent powerful settling of pigments and extenders, reduces sagging.

Defoamer and Deaerater

Additive name	Dosage	WB SB 100%	Characteristics	% Active content	Monomer or/and solvent content	Description
Defoamers						
MODAFLOW® RESIN	0,1 – 1,0% total	SB & 100%	Acrylic copolymer; high molecular weight; FDA-approved	100%		Highly efficient flow promoter with excellent degassing properties. Recommended for all solventborne and 100% UV Systems, especially for pigmented top coats.
ADDITOL® XL 6531	0,1 - 0,5% total	SB & 100%	Polymer defoamer	40%	Solvent naphtha	Special polymer defoamer/deaerater, recommended for pigmented systems.
ADDITOL® XL 6507	0,1 – 1,5% total	SB & 100%	Degassing / defoaming polymers; silicone free	10%	Xylene, Ethylbenzene	Defoamer and deaerater for all industrial paints and lacquers, high efficient.
ADDITOL® XW 6584	0,05 – 0,5% total	WB	Emulsifier free silicone emulsion, hydrophobic solid particles	20%	Water	Highly efficient defoamer for transparent and high gloss systems. Suitable for high and low PVC formulations. No interference with associative thickeners - no impact on rheological profile.
ADDITOL® VXW 6386	0,5 – 1,5% total	WB	Hydrocarbons, waxes	100%	Dodecane	Defoamer for high quality lacquers with good compatibility. Homogenize prior use!
ADDITOL® VXW 6211	0,05 – 0,5% total	WB	Hydrocarbons; hydrophobic solid particles	100%		Very strong defoamer for highly pigmented paints or pigment pastes.
ADDITOL® VXW 4926	2,0 – 15,0% binder	WB	Special fatty acid ester	100%		Defoamer and deaerater with rheology improvement in order to allow better film build-up. Very fast mode of action.
ADDITOL® XW 376	0,05 – 0,5% paint	WB	Mineral oil / wax emulsion	50%		High efficient, easy to incorporate defoamer emulsion.

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