

CYTEC



Graphic Arts

RADCURE[®]

Energy curable resins

Europe, Middle East and Africa

About Us

Total Solutions Provider

Cytec Industries is one of the world's leading specialty chemicals and materials technology companies. Our focus is on creating advanced technological solutions in global markets, including aerospace, coatings, mining, plastics and water treatment.

We are a total solutions provider with a broad range of products, including eco-friendly technologies. We support our customers worldwide with excellent technical service and applications research.

Innovative Technology

Cytec's products are innovative and diverse, and can help manufacturers realize the competitive advantages of environmental compliance, while also meeting their needs for:

- Improved performance (scratch/stain/corrosion resistance, and adhesion)
- Greater ease of application (required cure response)
- Better finishes (gloss/matte, texture, and specialty)

Broad Product Portfolio

We offer an extensive selection of performance-driven products, including low volatile organic compounds (VOC) and hazardous air pollutant substance-free (HAPS) technologies, for existing and emerging markets:

- Industrial
- Architectural/Construction
- Automotive/Transportation
- Wood/Paper
- Plastic

- Opto-electronics
- Graphic Arts
- Packaging/Adhesives

Our product portfolio is inclusive:

- UV/EB energy curable resins
- Liquid coating resins
 - Waterborne
 - High solids
 - Solvent-borne
- Amino crosslinkers
- Powder coating resins
- Coating additives

Global Technical Support

Through our manufacturing facilities, technology and distribution centers, we are able to provide responsive service on a consistent global basis, and to help our customers identify and profit from emerging opportunities.



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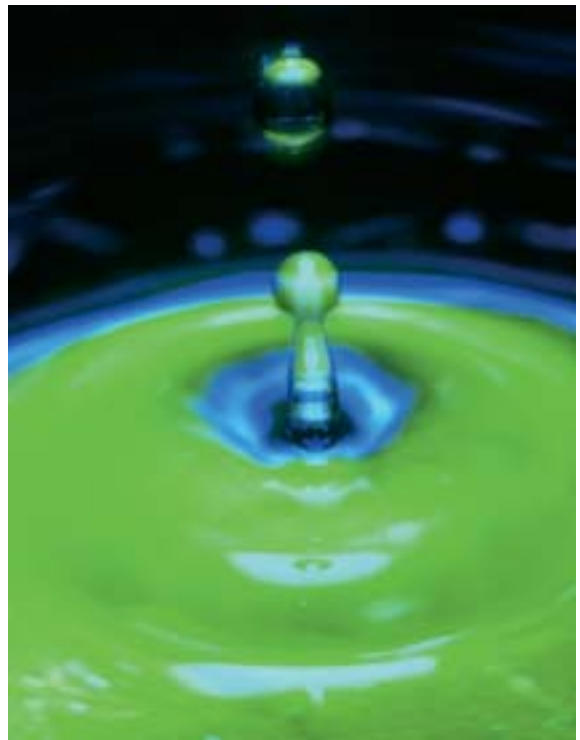
Provider of innovative solutions to the graphics industry

We are committed to consolidating our leadership position as the preferred supplier to the global energy-curable graphics industry. We shall continue to deliver added value to our customers through innovative market-driven solutions based on technological and operational excellence.

To fulfil our objective of delivering superior value to our customers, we have a dedicated technical service team investigating inks and varnishes requirements for all printing processes. Based on this, we have designed a full range of UV/EB binders and resins that address the most stringent needs of the energy-curing graphics market.

With numerous plants, research and technical service centres around the world, we are in a strong position to satisfy the multidimensional requirements of our customers with unrivalled world-class levels of service.

This brochure is divided into two parts. The first part lets formulators select binders and resins to match the desired ink characteristics, based on the application technology, while the second lists all the available products by chemical family.



	Mw	molecular weight
	AV	acid value
	OHV	hydroxyl value
Key		
	●	→ ●●●●●
Pigment wetting	Poor	Very good
Tack	High	Low
Misting	High	Low
Ink water balance	Poor	Very good
Reactivity	Low	High
Adhesion	Poor	Very good
Rubber compatibility	Swells ink rollers	No effect on ink rollers
Flow	Poor	Very good
Substrate wetting	Poor	Very good
Solvent/water resistance	Poor	Very good
Flexibility	Poor	Very good
Yellowing	Yellowing	No yellowing
Viscosity	Höppler viscosity, expressed in mPa.s	
Dilution	Parts of diluent in 100 parts of product	
-C=C-	Unsaturation content expressed in meq/g	

6 Printing Technologies

Products for paste inks (lithography, letterpress)

Products	Pigment wetting	Tack 350 m/min	Misting	Ink water balance	Reactivity
Oligomers/Diluting acrylates					
DPHA	●●●●	●●●●	●●	●	●●●●●●
OTA 480	●●●	●●●	●	●●	●●●
TMPTA	●●	●●●	●	●●	●●●●
EBECRYL®* 40	●●	●●●	●●	●●	●●●
EBECRYL 140	●●●	●●●●	●●	●●	●●●●
EBECRYL 150	●●●●	●●●●●	●●●	●●●	●●●
EBECRYL 160	●●●	●●●	●	●●	●●●
EBECRYL 220	●●	●●	●●	●	●●●●●
EBECRYL 436	●	●	●●	●●	●●
EBECRYL 438	●	●	●●	●●	●●
EBECRYL 446	●	●	●●	●●●	●●
EBECRYL 450	●●●●	●●●	●●	●●●●	●●●●
EBECRYL 525	●	●	●●	●	●
EBECRYL 648	●●●	●●●●	●●●	●	●●●●
EBECRYL 657/1657	●●●●	●	●●●	●●●●	●●●
EBECRYL 811	●●	●●●●	●●●●	●●●	●●
EBECRYL 812	●●●	●●●●	●●●	●●	●●●
EBECRYL 845	●●●●	●	●●●	●●●●	●●
EBECRYL 846	●●	●●	●●●	●●	●●●●
EBECRYL 859	●●●●●	●●●	●●●	●●●●●	●●●●●
EBECRYL 860	●●	●●●	●●●	●	●
EBECRYL 870/1870	●●●●	●●	●	●●●●	●●●●
EBECRYL 1606	●●	●	●●●	●	●●●●●
EBECRYL 1608	●●	●	●●●	●	●●●●●
EBECRYL 3420	●●	●●	●●●	●●	●●●●●
EBECRYL 3608	●●	●●	●●	●●	●●●
EBECRYL 3700/250T	●●	●	●●●	●	●●●●●
EBECRYL 3701	●●●	●	●●●	●●●	●●●
EBECRYL 3702	●●●	●●	●●	●●●	●●●
EBECRYL 6040	●●	●	●●●	●	●●●●●
Additives					
EBECRYL 350					●●
EBECRYL 373	●	●●●●	●●●●●	●	●●●
EBECRYL 1360					●●●●

* EBECRYL UV curable resins

Adhesion	Rubber compatibility
●●	●●●●●
●●	●●●
●●●	●●
●●●	●●●●
●●	●●●
●	●●●●
●●	●●●
●●●	●●●●●
●●●●	●●●
●●●●	●●●●
●●●●	●●●●
●●●	●●
●●●●●	●
●●	●●●
●	●●●●●
●●●	●●●
●●●	●●●●
●	●●●●●
●●	●●●
●	●●●●●
●	●●●
●●	●●●●
●●	●●
●	●●●
●●	●●●●
●	●●●
●●●	●●●●●
●	●●●●
●	●●●
●●●●●	
●	●●
●●●●●	



8 Printing Technologies

(continued)

Products for flexographic inks

Products	Pigment wetting	Reactivity	Adhesion plastic/metal	Flow
Oligomers/Diluting acrylates				
DPGDA	●●	●●	●●●	●●
EBECRYL®* 40	●●	●●●	●●●	●●●
EBECRYL 53	●●●	●●●	●●	●●●
EBECRYL 80	●●	●●●●	●●	●●
EBECRYL 81	●●	●●●●	●●	●●●
EBECRYL 83	●●	●●●●	●●	●●
EBECRYL 140	●●●	●●●●	●●	●●●●
EBECRYL 145	●●	●●	●●●	●●●
EBECRYL 153	●●●	●●●	●●●	●●●●
EBECRYL 160	●●●	●●●	●●	●●●●
EBECRYL 450	●●●●	●●●●	●●●	●●●●
EBECRYL 648	●●●	●●●●●	●	●●●
EBECRYL 657/1657	●●●●	●●●	●	●●●●
EBECRYL 812	●●●	●●●	●●●	●●●●
EBECRYL 870/1870	●●●●	●●●●	●●	●●●●
EBECRYL 3301	●●●●●	●●●	●●	●●●●●
EBECRYL 3420	●●●	●●●●●	●●	●●●
EBECRYL 3700	●●●	●●●●●	●	●●●
EBECRYL 3701	●●●	●●●	●●●	●●●
EBECRYL 3703	●●●	●●●●	●●●	●●●
EBECRYL 7100	●●	●●●●	●●●●	●●●
EBECRYL 8402	●●	●●●	●●●●	●●●
OTA 480	●●●	●●●	●●	●●●
TMPTA	●●	●●●●	●●●	●●●
TPGDA	●●	●●	●●	●●
Additives				
MODAFLOW®* 9200		●	●●	●●●●
EBECRYL 350		●●	●●●●	●●●●

* EBECRYL UV curable resins
 * MODAFLOW flow modifiers

Grinding/Let down

Let down

Let down

Let down

Let down

Let down

Let down

Let down

Let down

Let down

Let down

Grinding

Grinding

Grinding

Grinding

Grinding

Grinding

Grinding

Grinding

Grinding/Let down

Grinding/Let down

Let down

Let down

Let down

Let down

Let down

Let down

Let down



Products for screen inks

Products	Pigment wetting	Reactivity	Adhesion plastic/metal	Solvent resistance	Flexibility
Oligomers/Diluting acrylates					
DPGDA	●●	●●	●●●	●●●	●●
DPHA	●●●●	●●●●●	●●	●●●●	●
EBECRYL®* 110	●●	●	●●●	●	●●●●
EBECRYL 113	●●	●	●●●	●	●●●
EBECRYL 114	●●	●	●●●	●	●●●●
EBECRYL 140	●●●	●●●●	●●	●●●	●
EBECRYL 145	●●	●●	●●●	●●●	●●
EBECRYL 160	●●●	●●●	●●	●●●	●●
EBECRYL 210	●●	●●	●●●●●	●●	●●●●
EBECRYL 220	●●	●●●●●	●●●	●●●●●	●
EBECRYL 230	●	●	●●●●●	●	●●●●●
EBECRYL 244	●●●	●●	●●●●●	●	●●●●
EBECRYL 245	●●●	●●	●●●●●	●●	●●●●
EBECRYL 264	●●●	●●●	●●●	●●●●	●●●
EBECRYL 265	●●●	●●●	●●●	●●●●	●●●
EBECRYL 284	●●●	●●●	●●●●	●●●	●●●
EBECRYL 285	●●●	●●●	●●●●	●●●	●●●
EBECRYL 294/25HD	●●●	●●●●	●●●●	●●●●	●●●●
EBECRYL 303	●●	●●	●●●●●	●●	●●
EBECRYL 524	●	●	●●●●●	●●	●●
EBECRYL 525	●	●	●●●●●	●●	●●
EBECRYL 584	●	●	●●●●●	●●●	●●
EBECRYL 586	●	●●	●●●●●	●●●	●
EBECRYL 605	●	●●●●	●	●●●●●	●●
EBECRYL 741	●●	●●	●●●●●	●●	●●●
EBECRYL 745	●●	●●	●●●●●	●●	●●●
EBECRYL 767	●●	●	●●●●	●●	●●●●
EBECRYL 1040	●●●	●●	●●●●	●●	●●●●
EBECRYL 1290	●●	●●●●●	●●●	●●●●●	●
EBECRYL 3701	●●●	●●●	●●●	●●●●	●●●
EBECRYL 3703	●●●	●●●	●●●	●●●●	●●●
EBECRYL 4820	●●●	●●	●●●●	●●●●●	●●●
EBECRYL 5129	●●	●●●●●	●●●	●●●●●	●
EBECRYL 7100	●●	●●●●	●●●●	●●●	●●
EBECRYL 8201	●●●	●●●	●●●	●●●●	●●●
HDDA	●●●	●●	●●●●	●●●	●●
IBOA	●●	●	●●●●	●	●
ODA	●	●	●●●	●	●●●●●
PETIA	●●	●●●●	●●●●	●●●●	●
TMPTA	●●	●●●●	●●●	●●●	●
TPGDA	●●	●●	●●	●●●	●●

* EBECRYL UV curable resins

Products	Pigment wetting	Reactivity	Adhesion plastic/metal	Flow	Flexibility
Water dilutable oligomers					
EBECRYL® 11	●	●●	●●	●	●●●
EBECRYL 12	●	●●	●●	●	●●
EBECRYL 2002	●●	●●●	●●●●●	●●●●●	●●●●●
EBECRYL 2003	●●	●●●	●●●●●	●●●●●	●●●●●
EBECRYL 2047	●	●●●	●●●	●●●●	●●●
Additives					
EBECRYL 168	●	●	●●●●●	●	●●
EBECRYL 170	●	●	●●●●●	●	●●
EBECRYL P115	●	●●●●●	●	●●●	●●
MODAFLOW®* 9200	●●	●	●●	●	

* MODAFLOW flow modifiers



Products for inkjet

Products	Pigment wetting	Reactivity	Adhesion plastic/metal	Flow	Flexibility
Oligomers/Diluting acrylates					
DPGDA	●●	●●	●●●	●●	●●
DPHA	●●●●	●●●●●	●●	●●●●	●
EBECRYL®* 81	●●	●●●●	●●	●●●	●●●
EBECRYL 113	●●	●	●●●	●●●●	●●●
EBECRYL 114	●●	●	●●●	●●●●	●●●●
EBECRYL 130	●●●●●	●●	●●	●●●●●	●●
EBECRYL 140	●●●	●●●●	●●	●●●●	●
EBECRYL 145	●●	●●	●●●	●●●	●●
EBECRYL 151	●●●●●	●●	●●	●●●●●	●●
EBECRYL 152	●●●	●●	●●●	●●●●	●●
EBECRYL 810	●●	●●●	●●	●●●●	●●
EBECRYL 1040	●●●	●●	●●●●	●●●●	●●●●
EBECRYL 7100	●●	●●●●	●●●●	●●●	●●
HDDA	●●●	●●	●●●●	●●●●	●●
IBOA	●	●●	●●●●	●●●●	●●
ODA	●●●	●	●●	●●●●	●●●●●
OTA 480	●●●	●●●	●●	●●●	●
TMPTA	●●	●●●●	●●●	●●●	●
TPGDA	●●	●●	●●	●●	●●

* EBECRYL UV curable resins



Products for overprint varnishes

Products	Reactivity	Substrate wetting	Adhesion plastic/metal	Solvent resistance
Oligomers/Diluting acrylates				
DPGDA	●●	●●	●●●	●●●
EBECRYL®* 40	●●●	●●●●	●●●	●●●●●
EBECRYL 80	●●●●	●●●	●●	●●
EBECRYL 81	●●●●	●●●	●●	●●
EBECRYL 83	●●●●	●●●	●●	●●●
EBECRYL 113	●	●●	●●●●	●●
EBECRYL 145	●●	●●	●●●	●●●
EBECRYL 160	●●●	●●●●	●●	●●●
EBECRYL 210	●●	●●	●●●●●	●●
EBECRYL 220	●●●●●	●●●	●●●	●●●●●
EBECRYL 264	●●●	●●●	●●●	●●●●
EBECRYL 284	●●	●●●●	●●●●	●●●●
EBECRYL 524	●	●●	●●●●●	●●●●
EBECRYL 605	●●●●	●●	●	●●●●●
EBECRYL 608	●●●●●	●●	●	●●●●●
EBECRYL 745	●●	●●●	●●●●●	●●
EBECRYL 841	●●●●	●●●	●●	●●●
EBECRYL 860	●	●●●	●	●
EBECRYL 1608	●●●●●	●●	●	●●●●●
EBECRYL 3701	●●●	●●●	●●●	●●●●
EBECRYL 5129	●●●●●	●●	●●●	●●●●●
EBECRYL 6040	●●●●●	●●	●	●●●●●
EBECRYL 7100	●●●●	●●●	●●●●	●●●
HDDA	●●	●●	●●●●	●●●
OTA 480	●●●	●●	●●	●●●
PETIA	●●●●	●●●●	●●●●	●●●●
TMPA	●●●●	●●	●●●	●●●
TPGDA	●●	●●	●●	●●●●

Products	Slip	Substrate wetting	Adhesion plastic/metal	Solvent resistance
Additives				
EBECRYL 341	●●●●●	●	●	●
EBECRYL 350	●●●●●	●●●●●	●●●●●	●
EBECRYL 1360	●●●●●	●●●●●	●●●●●	●●
EBECRYL P115	●	●●●	●	●●●
MODAFLOW®* 9200	●●	●●●●●	●●	●

* EBECRYL UV curable resins

* MODAFLOW flow modifiers

14 Product Range

Polyether and polyester acrylates

Polyether acrylates are known for their low viscosity and good reactivity. Polyester

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

Polyether and polyester acrylates

Products	Product description	Dilution	Func-tionality	Mw g/mol	Viscosity 25°C-mPa.s	Viscosity 60°C-mPa.s	Density g/cm ³	AV mgKOH/g
<i>EBECRYL</i> ^{®*} 80	Amine modified polyether acrylate		3	1000	3000		1.05	
<i>EBECRYL</i> 81	Amine modified polyether acrylate		3	600	100		1.08	
<i>EBECRYL</i> 83	Amine modified polyether acrylate		3	1000	500		1.11	
<i>EBECRYL</i> 450	Hexafunctional polyester acrylate		6	1600	8600		1.12	20
<i>EBECRYL</i> 657/1657	Tetrafunctional polyester acrylate		4	1500	125000	3500	1.03	20
<i>EBECRYL</i> 811	Tetrafunctional polyester acrylate		4	NA	75000	1850	1.14	8
<i>EBECRYL</i> 812	Tetrafunctional polyester acrylate		4	800	8000	325	1.14	8
<i>EBECRYL</i> 841	Amine modified polyether acrylate		3.5		600		1.10	
<i>EBECRYL</i> 845	Tetrafunctional polyester acrylate	20 OTA	4	1500	20000		1.11	20
<i>EBECRYL</i> 846	Modified polyester acrylate		6	1100	45000		1.10	10
<i>EBECRYL</i> 859	High Mw polyester acrylate		6	3000	36000	900	1.11	3
<i>EBECRYL</i> 870/1870	Hexafunctional polyester acrylate		6	1500	48000		1.08	15

* *EBECRYL* UV curable resins

Diluted polyester resins

Products	Product description	Dilution	Func-tionality	Mw g/mol	Viscosity 25°C-mPa.s	Viscosity 60°C-mPa.s	Density g/cm ³	AV mgKOH/g
<i>EBECRYL</i> ^{®*} 436	Chlorinated polyester resin	40 TMPTA		5000	90000	1500	1.28	25
<i>EBECRYL</i> 438	Chlorinated polyester resin	40 OTA 480		5000	90000	1500	1.26	25
<i>EBECRYL</i> 446	Chlorinated polyester resin	32 TMPTA		4400	100000	1800	1.14	25
<i>EBECRYL</i> 524	Polyester resin	30 HDDA		1000	60000		1.22	30
<i>EBECRYL</i> 525	Polyester resin	40 TPGDA		1000	40000		1.21	25
<i>EBECRYL</i> 584	Chlorinated polyester resin	40 HDDA		2700	2000		1.32	25
<i>EBECRYL</i> 586	Chlorinated polyester resin	40 TMPTA		2700	45000		1.35	20

* *EBECRYL* UV curable resins

OHV mgKOH/g	Colour Gardner	Adhesion	Solvent resistance	Reactivity	Flexibility	Yellowing	Pigment wetting	Key features
	200A	●●	●●	●●●●	●●●●	●●	●●	High reactivity. Nitrogen content: 1.5 %.
	2	●●	●●	●●●●	●●●●	●●	●●	High reactivity combined with good diluting power. Nitrogen content: 1.4 %.
	2	●●	●●●●	●●●●	●●●●	●●	●●	High reactivity. Low viscosity and low residual odour. Non-irritating. Nitrogen content: 1.0 %
70	dark	●●●●	●●	●●●●	●	●	●●●●	Very good lithographic behaviour, good pigment wetting and high reactivity.
25	dark	●	●	●●●●	●●	●	●●●●	Very good lithographic behaviour and pigment wetting. EBECRYL® 1657 is a low odour version of EBECRYL 657 .
	1	●●	●	●●	●●	●	●●	Good adhesion to plastics. Good cure response. Recommended for waterless offset inks.
	1	●●●●	●●	●●●●	●●	●●	●●●●	Designed for flexographic applications. Good adhesion.
	200A	●●	●●●●	●●●●	●●●●	●●	●●	High reactivity. Low viscosity.
	dark	●	●	●●	●●	●	●●●●	Very good lithographic behaviour and pigment wetting.
	dark	●●	●●●●	●●●●	●	●●	●●	Very high reactivity.
	yellow	●	●●●●	●●●●●●	●	●	●●●●●●	Excellent lithographic behaviour on high speed presses. High reactivity. Very good pigment wetting.
30	dark	●●	●●●●	●●●●	●	●	●●●●	High reactivity. Very good lithographic behaviour and pigment wetting. EBECRYL 1870 is a low odour version of EBECRYL 870 .

OHV mgKOH/g	Colour Gardner	Adhesion	Solvent resistance	Reactivity	Flexibility	Yellowing	Pigment wetting	Key features
	5	●●●●●	●	●●●●	●●	●	●	Good adhesion to metals and plastics.
	5	●●●●●	●	●●	●●	●	●	Good adhesion to metals and plastics.
	5	●●●●●	●	●●●●	●●	●	●	Good adhesion to metals and plastics. Improved lithographic behaviour.
20	250A	●●●●●●	●●	●	●●	●●	●	Good adhesion to difficult substrates. Recommended for laminating adhesives.
40	200A	●●●●●●	●●	●	●●	●●	●	Good adhesion to difficult substrates. Recommended for laminating adhesives and for OPV on conventional inks.
40	3	●●●●●●	●●●●	●	●●	●	●	High reactivity and good adhesion to plastics.
NA	3	●●●●●●	●●●●	●●	●	●	●	High reactivity and good adhesion to plastics.

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, however they produce high gloss coatings.

Epoxy acrylates

Products	Product description	Dilution	Functionality	Mw g/mol	Viscosity 25°C-mPa.s	Viscosity 60°C-mPa.s	Density g/cm ³	AV mgKOH/g
EBECRYL®* 600	Standard bisphenol A epoxy acrylate		2	500		3000	1.13	2
EBECRYL 605	Standard bisphenol A epoxy acrylate	25 TPGDA	2	500	7500		1.17	2
EBECRYL 608	Standard bisphenol A epoxy acrylate	25 OTA 480	2	500	25000		1.15	2
EBECRYL 645	Modified diacrylate of bisphenol A epoxy resin	25 TPGDA	2	500	16500		1.13	2
EBECRYL 648	Modified diacrylate of bisphenol A epoxy resin	25 OTA 480	2	500	47500		1.14	2
EBECRYL 860	Epoxidised soya bean acrylate		2	1200	25000		1.03	15
EBECRYL 1606	Standard bisphenol A epoxy acrylate	20 TMPTA	2	500	3000		1.15	2
EBECRYL 1608	Standard bisphenol A epoxy acrylate	15 OTA 480	2	500		1000	1.17	2
EBECRYL 3301	Modified bisphenol A epoxy acrylate	25 DPGDA	2	500	8000		1.10	2
EBECRYL 3420	Low viscosity, modified epoxy acrylate		2	500	22000		1.14	2
EBECRYL 3608	Fatty acid modified epoxy acrylate	15 OTA 480	2	550		1000	1.14	2
EBECRYL 3700	Standard bisphenol A epoxy acrylate		2	500		4000	1.14	2
EBECRYL 3700/25OT	Standard bisphenol A epoxy acrylate	25 OTA 480	2	500	60000		1.16	2
EBECRYL 3701	Modified bisphenol A epoxy acrylate		2	850		7000	1.14	5
EBECRYL 3702	Fatty acid modified epoxy acrylate		2	500		3600	1.14	3
EBECRYL 3703	Amine modified bisphenol A epoxy acrylate		2	850		4250	1.17	5
EBECRYL 3708	Modified bisphenol A epoxy acrylate		2	1300	200000	4200	1.16	3
EBECRYL 6040	Modified diacrylate of bisphenol A epoxy resin		2	500	25000		1.14	2

* **EBECRYL** UV curable resins

OHV mgKOH/g	Colour Gardner	Adhesion	Solvent resistance	Reactivity	Flexibility	Yellowing	Pigment wetting	Key features
220	2	●	●●●●●●	●●●●●●	●●	●	●	Fast cure, high gloss, excellent solvent resistance. Low colour.
190	2	●	●●●●●●	●●●●●●	●●	●	●	Fast cure, high gloss, excellent solvent resistance. Low colour.
195	2	●	●●●●●●	●●●●●●	●●	●	●	Fast cure, high gloss, excellent solvent resistance. Low colour.
	3	●	●●●●●●	●●●●●●	●●	●	●●●●	Good pigment wetting, fast cure, high gloss, excellent solvent and good water resistance.
	3	●	●●●●●●	●●●●●●	●●	●	●●●●	Good pigment wetting, fast cure, high gloss, excellent solvent and good water resistance.
	10	●	●	●	●●●●●	●	●●	Hot foil stamping.
	1	●●	●●●●●●	●●●●●●	●●	●	●●	Fast cure, high gloss, excellent solvent resistance. Low colour.
205	2	●	●●●●●●	●●●●●●	●●	●	●●	Fast cure, high gloss, excellent solvent resistance. Low colour.
	7	●	●●●●●	●●●●●	●●	●	●●●●●●	Excellent pigment wetting combined with suitable viscosity for three roll mill grinding.
	3	●●	●●●●●●	●●●●●●	●●●●	●	●●	Flexible, good pigment wetting.
200	2	●	●●●●	●●●●	●●	●	●●	Good lithographic behaviour.
	3	●	●●●●●●	●●●●●●	●●	●	●●	Fast cure, high gloss, excellent solvent resistance. Good pigment wetting properties.
	3	●	●●●●●●	●●●●●●	●●	●	●●	Good pigment wetting.
	6	●●●●	●●●●●	●●●●	●●●●	●	●●●●	Flexible, good adhesion to plastics.
	6	●	●●●●	●●●●	●●	●	●●●●	Good lithographic behaviour and pigment wetting.
	5	●●●●	●●●●●	●●●●●	●●●●	●	●●●●	Very good flexibility, high reactivity, good adhesion to plastics.
	4	●●●●●	●●●●	●●●●	●●●●●●	●	●●●●	Very good flexibility, adhesion to plastics.
195	2	●●	●●●●●●	●●●●●●	●●	●	●	Low viscosity. High surface resistance, high gloss, good solvent resistance.

18 Product Range (continued)

Urethane acrylates

Urethane acrylates are the most versatile products, they are 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 and cure speeds. Products are available in a wide range of viscosities. Aliphatic urethane acrylates are, in comparison to aromatic urethane acrylates, known for their non-yellowing performance.

Urethane acrylates

Products	Product description	Dilution	Functionality	Mw g/mol	Viscosity 25°C-mPa.s	Viscosity 60°C-mPa.s	Density g/cm ³
EBECRYL®* 210	Aromatic difunctional urethane acrylate		2	1500		3900	1.11
EBECRYL 220	Aromatic hexafunctional urethane acrylate		6	1000	28500		1.22
EBECRYL 230	Aliphatic difunctional urethane acrylate		2	5000	40000		1.08
EBECRYL 244	Aliphatic difunctional urethane acrylate	12 HDDA	2	2000		8000	1.12
EBECRYL 245	Aliphatic difunctional urethane acrylate	25 TPGDA	2	2000		2500	1.10
EBECRYL 264	Aliphatic trifunctional urethane acrylate	15 HDDA	3	2000	45000		1.12
EBECRYL 265	Aliphatic trifunctional urethane acrylate	25 TPGDA	3	2000	35000		1.13
EBECRYL 270	Aliphatic difunctional urethane acrylate		2	1500		3000	1.10
EBECRYL 284	Aliphatic difunctional urethane acrylate	12 HDDA	2	1200		2100	1.18
EBECRYL 285	Aliphatic difunctional urethane acrylate	25 TPGDA	2	1200	23000		1.13
EBECRYL 294/25HD	Aliphatic trifunctional urethane acrylate	25 HDDA	3	1500		700	1.11
EBECRYL 1290	Aliphatic hexafunctional urethane acrylate		6	1000		2000	1.19
EBECRYL 2002	Water soluble aliphatic urethane acrylate	10 TPGDA	2	2500	25000		1.10
EBECRYL 2003	Water soluble aromatic urethane acrylate	10 TPGDA	2	2500		3000	1.14
EBECRYL 4820	Aliphatic trifunctional urethane acrylate	35 HDDA	3	1900	3300		1.08
EBECRYL 5129	Aliphatic hexafunctional urethane acrylate		6	800		700	1.18
EBECRYL 8201	Aliphatic trifunctional urethane acrylate		3	2100		2200	1.07
EBECRYL 8402	Aliphatic difunctional urethane acrylate		2	1000	12500		1.16

* EBECRYL UV curable resins

Colour Gardner	Adhesion	Solvent resistance	Reactivity	Flexibility	Yellowing	Pigment wetting	Key features
2	●●●●●	●●	●●	●●●●	●●	●	Undiluted, good flexibility, general purpose.
2	●	●●●●●	●●●●●	●	●●	●●●	Fast cure, high hardness and solvent resistance.
150A	●●●●●	●	●	●●●●●	●●●●●	●	Undiluted, high molecular weight resin. Very high flexibility.
2	●●●●●	●	●●	●●●●	●●●●●	●●●	High flexibility, non-yellowing.
2	●●●●●	●●	●●	●●●●	●●●●●	●●●	High flexibility, non-yellowing.
2	●●●●	●●●●●	●●●●	●●●	●●●●●	●●●	Good reactivity, good abrasion resistance and non yellowing.
2	●●●●	●●●●●	●●●●	●●●	●●●●●	●●●	Good reactivity, good abrasion resistance and non-yellowing.
2	●●●●	●●	●	●●●●	●●●●●	●●	Undiluted. Good flexibility, light stability and adhesion.
2	●●●●	●●●	●●●	●●●	●●●●●	●●●	Good exterior durability, good toughness.
2	●●●●	●●●	●●●	●●●	●●●●●	●●●	Good exterior durability, good toughness.
2	●●●●	●●●●●	●●●●	●●●●	●●●●●	●●●	High chemical and stain resistance. Excellent exterior durability.
1	●	●●●●●	●●●●●	●	●●	●●	Fast cure, high hardness, high solvent resistance and good exterior durability.
2	●●●●●	●●●●●	●●●	●●●●	●●●●	●●	Fast cure response, good flexibility and good adhesion. Water uptake: 70 %.
3	●●●●●	●●●●●	●●●	●●●●	●●	●●	Fast cure response, good flexibility and good adhesion. Water uptake: 80 %.
1	●●●●	●●●●●	●●	●●	●●●●●	●●●	Good exterior durability, good toughness and chemical resistance.
2	●●	●●●●●	●●●●●	●●	●●●●●	●●	Good scratch and abrasion resistance. More flexible than <i>EBECRYL 1290</i> .
3	●●●	●●●●	●●●	●●●●	●●●●●	●●●	Good flexibility, fast cure, tough and abrasion resistance.
2	●●●●●	●●●●	●●●●	●●●●	●●●●●	●●●	Undiluted. Good flexibility and toughness. Non-yellowing. Low shrinkage.

Acrylic acrylates

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

Acrylic acrylates

Products	Product description	Dilution	Viscosity 25°C-mPa.s	Viscosity 60°C-mPa.s	Density g/cm ³	AV mgKOH/g
<i>EBECRYL®* 303</i>	Hydrocarbon acrylate oligomer	45 HDDA	900		1.10	
<i>EBECRYL 740/40TP</i>	Acrylic oligomer	40 TPGDA		8500	1.05	
<i>EBECRYL 741</i>	Acrylic oligomer	45 HDDA	3500		1.05	
<i>EBECRYL 745</i>	Acrylic oligomer	25 TPGDA/ 25 HDDA	20000		1.05	1
<i>EBECRYL 767</i>	Acrylic oligomer	25 IBOA		8500	1.08	

* *EBECRYL* UV curable resins



OHV mgKOH/g	Colour Gardner	Adhesion	Solvent resistance	Reactivity	Flexibility	Pigment wetting	Key features
	0.5	●●●●●	●●	●●	●●	●●	Very good adhesion to plastics.
	3	●●●●●	●●	●●	●●●	●●	Very good adhesion to plastics. Good weathering.
	4	●●●●●	●●	●●	●●●	●●	Excellent adhesion to a wide range of plastic substrates combined with a low viscosity.
40	3	●●●●●	●●	●●	●●●	●●	Very good adhesion to plastics. Good weathering.
	3	●●●●	●●	●	●●●●	●●	Very good adhesion to plastics. Good weathering.

Diluting acrylates

As **RADCURE**[®] resin 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.

Diluting acrylates

Products	Product description	Mw g/mol	-C=C- meq/g	Viscosity 25°C-mPa.s	Density g/cm ³	AV mgKOH/g
Monofunctional products						
<i>EBECRYL</i> [®] * 110	Ethoxylated phenol acrylate	236	4.2	20	1.12	1
<i>EBECRYL</i> 113	Aliphatic monoacrylate	228	4.4	120	0.97	1
<i>EBECRYL</i> 114	Ethoxylated phenol acrylate	192	5.2	10	1.10	1
<i>EBECRYL</i> 1040	N-butyl 1,2 (acryloyloxy) ethyl carbamate	215	4.6	25	1.07	1
<i>ODA</i>	Octyl and decyl acrylate mixture	200	5	3	0.88	1
<i>IBOA</i>	Isobornyl acrylate	208	4.8	9	0.98	1

Difunctional products

<i>DPDGA</i>	Dipropylene glycol diacrylate	242	8.3	10	1.06	1
<i>EBECRYL</i> 11	Polyethylene glycol diacrylate	740	2.7	120	1.12	17
<i>EBECRYL</i> 130	Tricyclodecanediol diacrylate	300	6.6	160	1.01	1
<i>EBECRYL</i> 145	Propoxylated neopentylglycol diacrylate	328	6.1	20	1.01	1
<i>EBECRYL</i> 150	Diacrylated bisphenol A derivative	512	3.9	1400	1.14	5
<i>EBECRYL</i> 151	Modified diacrylate	280	7.1	125	1.09	1
<i>EBECRYL</i> 152	Modified diacrylate	290	6.9	20	1.07	1
<i>EBECRYL</i> 153	Diacrylated bisphenol A derivative	400	5	115	1.10	3
<i>HDDA</i>	Hexanediol diacrylate	226	8.8	10	1.03	1
<i>TPGDA</i>	Tripropylene glycol diacrylate	300	6.2	15	1.05	1

Trifunctional products

<i>EBECRYL</i> 12	Polyether triacrylate	782	3.8	155	1.11	5
<i>EBECRYL</i> 53	Propoxylated glycerol triacrylate	480	6.2	90	1.08	1
<i>EBECRYL</i> 160	Ethoxylated trimethylol propane triacrylate	428	6.5	80	1.09	1
<i>EBECRYL</i> 2047	Acrylated trifunctional resin	570	5.3	400	1.09	15
<i>OTA 480</i>	Propoxylated glycerol triacrylate	480	6.2	90	1.08	1
<i>TMPTA</i>	Trimethylol propane triacrylate	296	9.8	115	1.11	1

Tetrafunctional, hexafunctional products.

<i>DPHA</i>	Dipentaerythritol hexaacrylate	578	10.4	16000	1.18	8
<i>EBECRYL</i> 40	Polyether tetraacrylate	571	7.0	160	1.15	0,5
<i>EBECRYL</i> 140	Ditrimethylol propane tetraacrylate	438	9.1	1000	1.11	10
<i>PETIA</i>	Mixture of pentaerythritol tri- and tetraacrylate	298	11.1	1100	1.18	10

* *EBECRYL* UV curable resins

OHV mgKOH/g	Colour Gardner	Adhesion	Solvent resistance	Reactivity	Flexibility	Yellowing	Lithography	Flexography	Inkjet
15	5	●●●	●	●	●●●●	●			
	3	●●●●	●	●	●●●	●●●●●	✓		✓
	200A	●●●	●	●●	●●●●	●			✓
	100A	●●●●	●●	●●●●	●●●●	●●●●		✓	✓
	3	●●●	●	●	●●●●●	●●			✓
	50A	●●●●	●	●	●	●●		✓	✓
40	150A	●●●	●●●	●●	●●	●●●		✓	✓
	50A	●●	●	●●	●●●	●●●			
30	4	●●	●●●	●●	●	●●●●		✓	✓
40	200A	●●●	●●●	●●	●●	●●●		✓	✓
30	2	●	●●●	●●●	●●	●●	✓		
35	5	●●	●●●	●●	●●	●●●●		✓	✓
30	2	●●●	●●●	●●	●●	●●●●		✓	✓
35	3	●●●	●●●	●●●	●●	●●		✓	
15	40A	●●●●	●●●	●●	●●	●●●●		✓	✓
40	50A	●●	●●●	●●	●●	●●●		✓	✓
60	4	●●	●	●●	●●	●●●			
60	60A	●●	●●●	●●●	●	●●●	✓	✓	✓
25	200A	●●	●●●	●●●	●●	●●●●	✓	✓	✓
	3	●●●●	●●●●	●●●	●●●	●●●	✓	✓	✓
60	60A	●●	●●●	●●●	●	●●●	✓	✓	✓
30	50A	●●●	●●●	●●●	●	●●●●	✓	✓	✓
60	3	●●	●●●●	●●●●●	●	●●●	✓	✓	✓
60	2	●●●	●●●	●●●	●●	●●●		✓	✓
30	400A	●●	●●●	●●●●	●	●●●	✓	✓	✓
115	200A	●●●●	●●●●	●●●●	●	●●●	✓		

✓ = recommended for use

Screen	OPV	Key features
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✓		High flexibility.
✓	✓	Low odour. Good flexibility and adhesion. Xi free.
✓		Very good adhesion to plastic and metal substrates.
✓	✓	Urethane monoacrylate with low viscosity. Excellent flexibility and adhesion.
✓		Excellent flexibility. Good adhesion to non polar substrates. Good water resistance.
✓	✓	Low viscosity and colour. High Tg.

✓	✓	Good cure speed and flexibility.
✓		Completely miscible with water. Good flexibility. For screen inks and paper coatings.
✓		High Tg, low shrinkage. Good adhesion to rigid substrates.
✓	✓	Xi-free aliphatic difunctional acrylate with low surface tension.
	✓	High reactivity. Good scratch resistance.
		Excellent pigment wetting combined with low viscosity.
		Let down for inkjet inks. Good flow and levelling on wide range of plastic substrates.
	✓	Let down for flexo inks. High reactivity.
✓	✓	High diluting power. Excellent adhesion. Good weathering properties.
✓	✓	Good cure speed and flexibility.

✓		High flexibility. Can be used in water-based systems.
✓	✓	Low odour version of OTA 480.
✓	✓	More flexible than TMPTA. Good hardness, high gloss and fast cure speed.
✓	✓	Good flexibility and high reactivity.
✓	✓	Low viscosity and fast cure speed.
✓	✓	High cure speed, chemical and abrasion resistance.

✓	✓	Very high reactivity. High hardness and high scratch resistance.
✓	✓	Low shrinkage and high reactivity.
✓	✓	High reactivity and good hardness. Xi free.
✓	✓	Hard, good chemical resistance and adhesion.



24 Product Range (continued)

Cationic UV curable resins

Cationic UV cure technology is used to produce solvent-free, environmental friendly lacquers, inks, coatings and adhesives, offering unique film properties. Typical applications for cationic UV cure technology are metal decoration on cans, packaging inks (including aluminium laminating adhesives and overprint varnishes). As the ionic polymerization reaction continues after exposure to UV light, a process known as post cure or dark cure effect, practically all of the reactive species are incorporated into the final polymer matrix.

Cationic UV curable resins

Products	Product description	Viscosity 25°C-mPa.s	Colour Gardner	Density g/cm ³	EEW g/mol	HEW g/mol
UVACURE[®]* 1500	Cycloaliphatic di-epoxide, high purity	275	100 Apha	1.17	134	
UVACURE 1503	Modified low viscosity cycloaliphatic di-epoxide	85	1	1.12	157	
UVACURE 1504	Cationic reactive diluent, OH-functional (cyclic ether)	25	1	1.02	116	484
UVACURE 1530	Modified cycloaliphatic di-epoxide, OH-functional	400	100 Apha	1.14	184	370
UVACURE 1533	Acrylic modified cycloaliphatic di-epoxide	310000	2	1.10	262	
UVACURE 1534	Modified cycloaliphatic di-epoxide, OH-functional	2300	1	1.10	268	375
UVACURE 1561	Epoxide/acrylate for hybrid, cationic/free radical curing	150000	5	1.18	451	

* **UVACURE** cationic UV curable resins

Abbreviations

EEW epoxy equivalent weight
HEW hydroxyl equivalent weight

Key

Tensile strength tensile strength at break measured on free films (ASTM D882)
Elongation elongation at break measured on free films (ASTM D882)
Young modulus obtained on free films (ASTM D882)
Toughness obtained on free films (ASTM D882)



Tensile strength MPa	Elongation %	Young modulus MPa	Toughness MPa	Key features
41	7	1048	2	Primary component of cationic UV-curing formulations giving a hard and tough film. Viscosity reducing diluent leading to flexible films.
				High cure speed, low viscosity diluting agent leading to a flexible film.
60	8	1379	3	High cure speed, strength, hardness, solvent resistance and crosslink density.
4	230	6	4	Soft, flexible, exceptional adhesion in coatings and laminating adhesives.
25	135	331	24	Good flexibility, good water resistance and excellent toughness.
77	8	1669	4	Faster initial cure, increased strength, improved chemical resistance.

26 Product Range (continued)

Additives

Reactive additives were specifically developed for radiation curing applications to give specific additive characteristics (adhesion, wetting, leveling, slip) while becoming part of the network after curing.

Additives level %

Products	Product description	Viscosity mPa.s at 25°C	Density g/cm ³	AV mg KOH/g	Colour Gardner	Lithography
Stabilizers						
<i>ADDITOL</i> [®] * S100	In-can stabilizer	50			Yellow	✓
<i>ADDITOL</i> S110	In-can stabilizer	500			Dark brown	✓
<i>ADDITOL</i> S120	In-can stabilizer	100			Pale	✓
<i>ADDITOL</i> S130	In-can stabilizer	100			Pale	✓
Adhesion promoters						
<i>EBECRYL</i> [®] * 168	Methacrylated acidic compound	1350	1.28	290	3	
<i>EBECRYL</i> 170	Acrylated acidic compound	3000	1.33	300	6	
Amine functional acrylate co-initiators						
<i>EBECRYL</i> 7100	Amine functional acrylate co-initiator	1000	1.10		4	
<i>EBECRYL</i> P115	Tertiary amine co-initiator	20	0.99		2	
Flow and leveling agents						
<i>EBECRYL</i> 350	Silicone diacrylate	350	1.05	7	10	
<i>EBECRYL</i> 1360	Silicone hexaacrylate	2100	1.11	25	10	
<i>MODAFLOW</i> [®] * 9200	Silicone free leveling agent	4000			Pale	
Miscellaneous						
<i>EBECRYL</i> 341	Silicone free slip agent	50			White	
<i>EBECRYL</i> 373	Anti misting additive	Paste			Yellow	✓

* *ADDITOL* additives

* *EBECRYL* UV curable resins

* *MODAFLOW* flow modifiers

Flexography	Inkjet	Screen	OPV	Addition level %	Key features
✓	✓	✓		1–3	Suitable for grinding and in-can stabilisation of white and pale colours. No negative impact on reactivity.
✓	✓	✓		1–3	Very effective for grinding and in-can stabilisation of a wide variety of pigmented systems. No negative impact on reactivity.
✓	✓	✓	✓	1–2	Universal use, for grinding and in-can stabilisation of pigmented systems and clear coatings. No negative impact on reactivity.
✓	✓	✓	✓	1–2	In-can stabilisation of clear coatings and pigmented systems, including metallic pigments.
		✓	✓	1–5	Adhesion promoter for metals and glass.
		✓	✓	5–8	Adhesion promoter for metals.
✓	✓	✓	✓	10–15	Highly efficient co-initiator. Excellent adhesion to plastic substrates. Nitrogen content: 3.5 %. Can be used as a resin.
		✓	✓	5–8	Highly efficient co-initiator. Nitrogen content: 4.9 %.
✓		✓	✓	0,5–2	Copolymerisable, substrate wetting and slip additive.
✓		✓	✓	0,5–2	Copolymerisable, substrate wetting and slip additive. Recommended for EB applications.
✓		✓	✓	0,5–2	Silicone free leveling agent with excellent compatibility.
			✓	2–5	Silicone free slip additive for use in OPVs. Allows overprintability.
				3–5	EBECRYL 373 reduces misting of paste inks.

✓ = recommended for use

Photoinitiators

Cytec has been the global leader in radiation curing chemicals for many years. Supplying monomers, oligomers and reactive diluents for both graphic arts and industrial coatings applications. In order to better service customers, Cytec has added photoinitiators to the already extensive portfolio of radiation curable products.

While focus for innovation and technical service remains on monomers and oligomers, Cytec provides excellent quality **ADDITOL**[®] photoinitiators.

The **ADDITOL** photoinitiator product range includes the most commonly used photoinitiators in graphic arts. The tables show the typical application areas for each of the **ADDITOL** photoinitiators.

Photoinitiators

Products	Product description	Type	State	Non yellowing	Lithography
ADDITOL [®] * BCPK	Benzophenone, 1-hydroxy-cyclohexylphenyl-ketone mixture	combination	liquid	✓	✓
ADDITOL BDK	2,2-dimethoxy-1,2-diphenylethan-1-one	α-cleavage	solid		✓
ADDITOL BP	Benzophenone	H-abstraction	solid		✓
ADDITOL CPK	1-hydroxy-cyclohexylphenyl-ketone	α-cleavage	solid	✓	✓
ADDITOL EHA	2-ethylhexyl-4-dimethylaminobenzoate	amine co-initiator	liquid		✓
ADDITOL EPD	Ethyl-4-(dimethylamino)benzoate	amine co-initiator	solid		✓
ADDITOL HDMAP	2-hydroxy-2-methyl-1-phenyl-propanone	α-cleavage	liquid	✓	✓
ADDITOL ITX	Isopropyl thioxanthone (2-and 4- isomer mixture)	H-abstraction	solid		✓
ADDITOL MBF	Methyl benzoyl formate	α-cleavage	liquid		✓
ADDITOL PBZ	4-phenyl benzophenone	H-abstraction	solid		✓
ADDITOL TPO	2, 4, 6-trimethylbenzoyl diphenyl phosphine oxide	α-cleavage	solid	✓	✓
EBECRYL [®] * P38	Acrylated derivative of benzophenone	H-abstraction	liquid		

* **ADDITOL** photoinitiators

* **EBECRYL** UV curable resins



Flexography	Inkjet	Screen	OPV	Key features
✓	✓	✓	✓	Good surface and through cure.
✓	✓	✓	✓	Good solubility. Balanced surface and through cure.
✓	✓	✓	✓	Good solubility. Excellent surface cure. To be used in combination with an amine synergist.
✓	✓	✓	✓	Good solubility. Good surface and through cure. None yellowing photoinitiator.
✓	✓	✓		Low odour. Good surface and through cure.
✓	✓	✓		Good solubility. Good surface and through cure.
✓	✓	✓	✓	Balanced surface and through cure.
✓	✓	✓	✓	Good solubility. Good through cure. Low odour.
✓	✓	✓	✓	Mild odour. Very good surface cure. Limited yellowing.
✓	✓	✓	✓	Low odour for inks and OPV.
✓	✓	✓		Low odour. Low volatility. Increased depth cure. Used in white pigmented systems.
			✓	Photoinitiator for low odor UV coatings.

✓ = recommended for use

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Products	Page	Products	Page	Products	Page
ADDITOL® BP	28	EBECRYL 264	10, 13, 18	EBECRYL 1606	6, 16
ADDITOL BDK	28	EBECRYL 265	10, 18	EBECRYL 1608	6, 13, 16
ADDITOL BCPK	28	EBECRYL 270	18	EBECRYL 2002	11, 18
ADDITOL CPK	28	EBECRYL 284	10, 13, 18	EBECRYL 2003	11, 18
ADDITOL EHA	28	EBECRYL 285	10, 18	EBECRYL 2047	11, 22
ADDITOL EPD	28	EBECRYL 294/25HD	10, 18	EBECRYL 3301	8, 16
ADDITOL HDMAP	28	EBECRYL 303	10, 20	EBECRYL 3420	6, 8, 16
ADDITOL ITX	28	EBECRYL 341	13, 26	EBECRYL 3608	6, 16
ADDITOL MBF	28	EBECRYL 350	6, 8, 13, 26	EBECRYL 3700	8, 16
ADDITOL PBZ	28	EBECRYL 373	6, 26	EBECRYL 3700/250T	6, 16
ADDITOL TPO	28	EBECRYL 436	6, 14	EBECRYL 3701	6, 8, 10, 13, 16
ADDITOL S100	26	EBECRYL 438	6, 14	EBECRYL 3702	6, 16
ADDITOL S110	26	EBECRYL 446	6, 14	EBECRYL 3703	8, 10, 16
ADDITOL S120	26	EBECRYL 450	6, 8, 14	EBECRYL 3708	16
ADDITOL S130	26	EBECRYL 524	10, 13, 14	EBECRYL 4820	10, 18
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EBECRYL 12	11, 22	EBECRYL 584	10, 14	EBECRYL 6040	6, 13, 16
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EBECRYL 53	8, 22	EBECRYL 600	16	EBECRYL 8201	10, 18
EBECRYL 80	8, 13, 14	EBECRYL 605	10, 13, 16	EBECRYL 8402	8, 18
EBECRYL 81	8, 12, 13, 14	EBECRYL 608	13, 16	EBECRYL P38	28
EBECRYL 83	8, 13, 14	EBECRYL 645	16	EBECRYL P115	11, 13, 26
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EBECRYL 113	10, 12, 13, 22	EBECRYL 657/1657	6, 8, 14	UVACURE® 1500	24
EBECRYL 114	10, 12, 22	EBECRYL 740/40TP	20	UVACURE 1503	24
EBECRYL 130	12, 22	EBECRYL 741	10, 20	UVACURE 1504	24
EBECRYL 140	6, 8, 10, 12, 22	EBECRYL 745	10, 13, 20	UVACURE 1530	24
EBECRYL 145	8, 10, 12, 13, 22	EBECRYL 767	10, 20	UVACURE 1533	24
EBECRYL 150	6, 22	EBECRYL 810	12	UVACURE 1534	24
EBECRYL 151	12, 22	EBECRYL 811	6, 14	UVACURE 1561	24
EBECRYL 152	12, 22	EBECRYL 812	6, 8, 14	DPGDA	8, 10, 12, 13, 22
EBECRYL 153	8, 22	EBECRYL 841	13, 14	DPHA	6, 10, 12, 22
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EBECRYL 210	10, 13, 18	EBECRYL 860	6, 13, 16	OTA 480	6, 8, 12, 13, 22
EBECRYL 220	6, 10, 13, 18	EBECRYL 870/1870	6, 8, 14	PETIA	10, 13, 22
EBECRYL 230	10, 18	EBECRYL 1040	10, 12, 22	TMPTA	6, 8, 10, 12, 13, 22
EBECRYL 244	10, 18	EBECRYL 1290	10, 18	TPGDA	8, 10, 12, 13, 22
EBECRYL 245	10, 18	EBECRYL 1360	6, 13, 26		

*ADDITOL additives

*EBECRYL UV curable resins and diluting oligomers

*MODAFLOW resin flow modifiers

*UVACURE cationic UV curable resins

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