POWDER COATING RESINS

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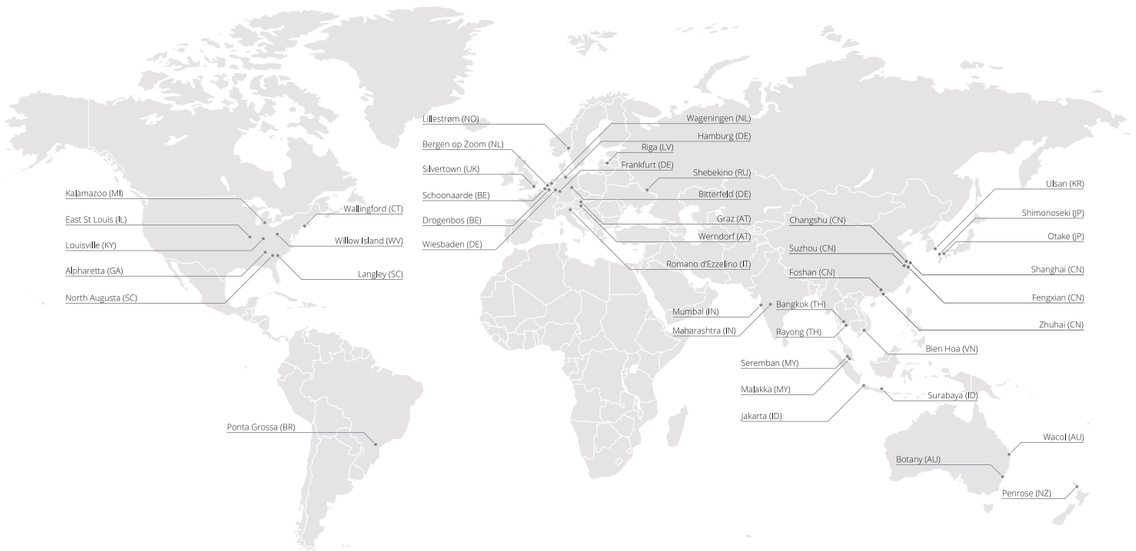
About allnex



Facts & Figures

- Global company with over €2.1 billion in sales
- Broad Technology portfolio: liquid coating resins, energy curable resins, powder coating resins, crosslinkers and additives, composites and construction materials
- Approximately 4000 employees
- Customers in more than 100 countries
- 33 manufacturing facilities
- 23 research and technology centers
- 5 ventures
- Extensive range of solutions for key composite segments: marine, transport, infrastructure, leisure and construction

With manufacturing, R&D and technical facilities located throughout Europe, North America, Asia Pacific and Latin America, allnex offers global and reliable supply of resins and additives combined with local, responsive customer support.

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Introduction to Powder Coating Resins and Additives

One-Source Global Supplier
allnex is a single-source, worldwide supplier of high-quality powder coating resins, hardeners and additives. we offer one of the broadest lines of resins for powder coating finishes,including top-name polyester resins, coupled with global product availability, and expert technical support.

Leading-edge Technologies
allnex continues to pioneer the development of innovative technologies for a wide range of surfaces:
- Super durable resins for exterior powder applications
- Resins for clearcoat and matte finishes
- Resins for low bake powder systems
- UV curing powder systems.

Our newest resin technologies are designed for cutting-edge applications where powder paints are not widely used, including industrial and automotive finishes:
- High-performance exterior durable systems
- Natural and manufactured wood products
- Plastic and other heat-sensitive substrates.

Wide Selection of Top Products
As a leading global supplier of powder coating resins, hardeners and additives, allnex offers one of the broadest choices of resins for powder coating finishes

Proven worldwide, our extensive selection of CRYLCOAT ® polyester resins include carboxyl and hydroxyl resins for hybrid, TGIC,glycidylester, hydroxy alkyl amide, urethane,and glycoluril powder coating systems.For new technologies like UV curable powder coatings, we have one of the widest product ranges available, including UVECOAT ® unsaturated resins.

allnex's powder coating resin technologies also include SYNTHACRYL™ acrylic resins and matting agents, specialty hardeners, and additives which can be supplied on a silica or resin carrier.

For improving flow and leveling characteristics in all types of coatings, the versatile MODAFLOW ® powder product family is the benchmark name among flow modifiers and powder resins in the coatings industry.

Bringing value to the formulation of powder coatings are ADDITOL ® masterbatch flow modifiers, catalysts and related products. Additionally, BECKOPOX™ and ADDITOL specialty hardeners solve problems related to flow,and provide special textures or performance to finished coatings.

Product Overview

Product	Description
Vehicle Binder Resins	
CRYLCOAT® *	Polyester powder resins including super durable and semi-crystalline products – Hydroxyl (-OH) resins for polyurethane and glycoluril powder coatings. – Carboxyl (-COOH) resins for hybrid, TGIC, glycidylester and β-HAA powder coatings.
SETAPOLL™ *	Glycidyl (GMA) acrylic powder resins and matting agents.
UVECOAT® *	Unsaturated resins for UV-curable powder coatings.
Curing Hardeners (Powder Crosslinkers)	
ADDITOL® *	Polyanhydride resin for epoxy functional (glycidyl) acrylics and urethane hardeners (where available) for hydroxyl binder resins.
BECKOPOX™ *	AnAnhydride-like resin for epoxy or hydroxyl functional binder resins.
Powder Additives and Modifiers	
MODAFLOW® *	powder resins flow modifiers on a silica carrier base
ADDITOL	Flow additives, catalysts, and tribo masterbatches provided on resin carriers.
SYNTHACRYL®	GMA acrylic matting agents.

*
ADDITOL ..... additives
BECKOPOX ..... anhydride hardener
CRYLCOAT ..... polyester resins
MODAFLOW ..... flow modifiers
SYNTHACRYL ..... acrylic resins
UVECOAT ..... UV-curable resins

Product Nomenclature

Thermoset powder coatings are typically cured in a temperature range of 160°C – 200°C (object temperature) for 10 minutes. Low temperature cure for heat sensitive substrates or for thick metallic objects is achieved through a combination of catalysis and/or longer oven dwell times. General cure guidelines for products listed in this bulletin are summarized below.

Cure Temperature and Time Definitions	
Slow	190°C or greater for 10 min
Medium	170 - 180°C for 10 min
Fast	160°C for 10 min
Low bake	150°C or lower for 10 - 30 min

From the wide range of resins available, users can match the desired properties with the required coating performance.
As an alternative, UV powders can be applied. The powder is made to flow with a brief IR heating followed by exposure to ultraviolet light.

Definition

Key Word	Description
Cure T, °C	Recommended temperature for the cure of coatings during a period of 10 minutes.
Tg, °C	Glass transition temperature of the resin.
IAC, mg KOH/g	Acid index as expressed by mg KOH per g resin.
IOH, mg KOH/g	Hydroxyl index as expressed by mg KOH per g resin.
EEW, g/eq	Epoxy equivalent weight as expressed by g of resin per equivalent of epoxy group.
NCO, % w/w	Isocyanate content as expressed by g of NCO by 100 g of resin.
Viscosity	The viscosity of the resin is measured at 200°C (175°C).
Tm, °C	Melt temperature.

The allnex product line for powder coatings has been renamed and renumbered to provide customers with a more logical understanding of the portfolio. The graphic sections of this guide contains both the new and old product names.Translations describing how the new product names were derived, and what they stand for, are provided in the tables below.

Digit 1	Digit 2	Digit 3 & 4	Digit 5
CRYLCOAT® System - 5 Digit System			
1 = Hybrid	5 = 50/50 6 = 60/40 7 = 70/30 8 = 80/20	Whenever possible equivalent to last two digits of former product name	- 0 = Standard (no additives) - 1 = Tribo - 2 = Overbake - 3 = Tribo and Overbake - 4 = Clear coat - 5 = Special - 6 = Low bake (< 160°C)
2 = Standard Outdoor 4 = Super Durable Outdoor 8 = Crystalline 9 = Other	4 = TGIC 5 = PT-910 6 = Primid 8 = Urethane		

Example: CRYLCOAT® 1514-2 = 314
Digit 1: 1 for Hybrid; Digit 2: 5 for 50/50; Digit 3 + 4: 14 from 314 and Digit 5: 2 for Overbake

Masterbatch Type	Number
ADDITOL® System	
Flow Aid	P 800 - P 899
Tribo, Catalyst, Crosslinkers	P 900 - P 999

Type	Number
UVECOAT® System	
General Purpose Resins	1000 - 1999
Resins for Metal Substrates	2000 - 2999
Resin for Wood and Plastic	3000 - 3999
Special (i.e., Crystalline)	9000 - 9999

Type	Number
SYNTHACRYL® System	
Acrylic - All	700 - 799

Architectural

Curing Temperature °C	HAA		TGIC		Urethane
Standard Durable					
160	CRYLCOAT 2609-6	CRYLCOAT 2668-6			
		CRYLCOAT 2693-6			
180	CRYLCOAT 2618-3	CRYLCOAT 2606-3	CRYLCOAT 2476-2	CRYLCOAT 2450-2	
	CRYLCOAT 2654-2	CRYLCOAT E 04809			
	CRYLCOAT 2640-3				
190	CRYLCOAT 2670-3	CRYLCOAT 2671-3	CRYLCOAT 2440-2		CRYLCOAT 2818-0
	CRYLCOAT 2650-3				
200	CRYLCOAT 2668-3		CRYLCOAT 2441-2	CRYLCOAT 2411-2	CRYLCOAT 2814-0
	CRYLCOAT 2693-3		CRYLCOAT 2441-3	CRYLCOAT 2452-2	CRYLCOAT 2860-0
			CRYLCOAT 2437-2		CRYLCOAT 2870-0
			CRYLCOAT 2416-2	CRYLCOAT E 04809	CRYLCOAT 2876-0
			CRYLCOAT 2418-2	CRYLCOAT 2470-2	
			CRYLCOAT 2413-2	CRYLCOAT 2478-1	

Curing Temperature °C	HAA		TGIC		Urethane
Super Durable					
160	CRYLCOAT 4655-2				
	CRYLCOAT 4643-3		CRYLCOAT 4442-2		
180					CRYLCOAT 4890-0
190	CRYLCOAT 4698-2				
	CRYLCOAT 4659-0	CRYLCOAT 4688-2			
200	CRYLCOAT 4420-0	CRYLCOAT 4641-0	CRYLCOAT 4420-0	CRYLCOAT 4430-5	CRYLCOAT 4874-0
	CRYLCOAT 4693-2	CRYLCOAT 4642-3	CRYLCOAT 4488-0	CRYLCOAT 4430-0	CRYLCOAT 4891-0
	CRYLCOAT 4651-0	CRYLCOAT 4679-0	CRYLCOAT 4478-0	CRYLCOAT E 04482	

Appliance

Curing Temperature °C	50/50		60/40		70/30	
Indoor						
160	CRYLCOAT 1540-0		CRYLCOAT E 04759		CRYLCOAT 1732-0	
170			CRYLCOAT 1631-0			
			CRYLCOAT 1620-0		CRYLCOAT 1701-0	
180	CRYLCOAT 1577-0	CRYLCOAT 1573-0	CRYLCOAT 1627-0	CRYLCOAT 1648-2	CRYLCOAT 1770-0	CRYLCOAT 1781-0
	CRYLCOAT 1510-0		CRYLCOAT E 04948		CRYLCOAT E 04811	
200			CRYLCOAT 1622-0	CRYLCOAT 1650-2		
			CRYLCOAT 1683-0			

Curing Temperature °C	HAA		TGIC		PU	
Outdoor						
190			CRYLCOAT 2425-0		CRYLCOAT 2868-0	

Auto

Curing Temperature °C	50/50		60/40	
Indoor/Primer				
160	CRYLCOAT 1540-0		CRYLCOAT E 04759	
170			CRYLCOAT 1620-0	
180	CRYLCOAT 1510-0		CRYLCOAT 1627-0	CRYLCOAT E 04948
200			CRYLCOAT 1622-0	CRYLCOAT 1630-0
			CRYLCOAT 1660-0	CRYLCOAT 1683-0

Curing Temperature °C	HAA		TGIC		URETHANE
Outdoor					
140			CRYLCOAT 2451-6		
160	CRYLCOAT 2609-6	CRYLCOAT 2696-6	CRYLCOAT 2499-6	CRYLCOAT 2435-6	
	● CRYLCOAT 4643-3	CRYLCOAT 2608-6	● CRYLCOAT 4442-2	● CRYLCOAT 4404-0	
180	CRYLCOAT 2684-4	● CRYLCOAT 4698-2			
		● CRYLCOAT E 03525			
190	● CRYLCOAT 4659-0				
200	● CRYLCOAT 4420-0	● CRYLCOAT 4641-0	● CRYLCOAT 4420-0	● CRYLCOAT 4430-0	● CRYLCOAT 4823-0
	● CRYLCOAT 4642-3	● CRYLCOAT 4679-0	● CRYLCOAT E 04482	● CRYLCOAT 4430-5	
			CRYLCOAT E 04417	CRYLCOAT 2496-2	
			● CRYLCOAT E 04484		

● Super Durable

ACE

Curing Temperature °C	HAA		TGIC	
Outdoor				
160	CRYLCOAT 2609-6	CRYLCOAT 2696-6		
	CRYLCOAT 2608-6		CRYLCOAT 2499-6	CRYLCOAT 2435-6
			● CRYLCOAT 4404-0	● CRYLCOAT 4452-0
180	CRYLCOAT 2606-3			
	● CRYLCOAT 4688-2	CRYLCOAT 2653-3		
190		● CRYLCOAT 4659-0		
200	● CRYLCOAT 4627-0		CRYLCOAT 2441-2	CRYLCOAT 2496-2
	● CRYLCOAT 4698-2		● CRYLCOAT 4488-0	
			● CRYLCOAT E 04484	

● Super Durable

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Curing Temperature °C	50/50		60/40		70/30	
Indoor						
160	CRYLCOAT 1540-0					
180					CRYLCOAT 1770-0	

Curing Temperature °C	HAA		TGIC		URETHANE
Outdoor					
180	CRYLCOAT 2665-2		CRYLCOAT 2450-2		
190	CRYLCOAT 2650-3		CRYLCOAT 2440-2		CRYLCOAT 2868-0
200			CRYLCOAT 2441-2	CRYLCOAT 2413-2	CRYLCOAT 2818-0
			CRYLCOAT 2441-3	CRYLCOAT 2691-2	
			● CRYLCOAT 4488-0	CRYLCOAT 2491-2	
				CRYLCOAT 2452-2	

● Super Durable

GI

Curing Temperature °C	50/50		60/40		70/30	
Indoor						
130		CRYLCOAT 1501-6				
140	CRYLCOAT 1506-6					
160	CRYLCOAT 1540-0	CRYLCOAT 1593-0	CRYLCOAT E 04759			
170			CRYLCOAT 1620-0		CRYLCOAT 1701-0	
180	CRYLCOAT 1577-0		CRYLCOAT 1648-2		CRYLCOAT 1703-1	CRYLCOAT 1738-2
	CRYLCOAT 1573-1		CRYLCOAT E 04948		CRYLCOAT 1770-0	CRYLCOAT 1791-2
					CRYLCOAT 1781-0	
					CRYLCOAT E 04811	
200			CRYLCOAT 1630-0	CRYLCOAT 1683-0	CRYLCOAT 1702-0	
			CRYLCOAT 1650-2			

Curing Temperature °C	HAA		TGIC		URETHANE	OTHER
Outdoor						
160	CRYLCOAT 2609-6	CRYLCOAT 2696-6	CRYLCOAT 2499-6	CRYLCOAT 2435-6		
	CRYLCOAT 2608-6					
180	CRYLCOAT 2618-3	CRYLCOAT 2695-0	CRYLCOAT 2421-5	CRYLCOAT 2450-2		CRYLCOAT 2505-4
	CRYLCOAT 2630-2	CRYLCOAT E 04849		CRYLCOAT 2476-2		
	CRYLCOAT 2684-4	CRYLCOAT 2606-3				
190	CRYLCOAT 2670-3	CRYLCOAT 2671-3	CRYLCOAT 2425-0	CRYLCOAT 2498-0	CRYLCOAT 2818-0	
			CRYLCOAT 2440-2		CRYLCOAT 2868-0	
200	CRYLCOAT 2635-2	CRYLCOAT 2691-2	CRYLCOAT 2419-2	CRYLCOAT 2441-3	CRYLCOAT 2814-0	CRYLCOAT 2920-0
			CRYLCOAT 2406-2	CRYLCOAT 2490-2	CRYLCOAT 2860-0	
			CRYLCOAT 2431-0	CRYLCOAT 2491-2	CRYLCOAT 2890-0	
			CRYLCOAT 2413-2	CRYLCOAT 2691-2		
			CRYLCOAT 2441-2	CRYLCOAT 2470-2		
			CRYLCOAT 2468-5	CRYLCOAT 2452-2		
			CRYLCOAT 2496-2	CRYLCOAT 2478-1		
			CRYLCOAT 2427-2			
			CRYLCOAT 2486-2			
	● CRYLCOAT 4420-0	● CRYLCOAT 4641-0	● CRYLCOAT 4420-0	● CRYLCOAT 4430-0		
		● CRYLCOAT 4642-3	● CRYLCOAT 4488-0			

● Super Durable

Furniture

Curing Temperature °C	50/50		60/40		70/30	
Indoor						
160	CRYLCOAT 1540-0				CRYLCOAT 1732-0	
170					CRYLCOAT 1701-0	
180					CRYLCOAT 1703-1	CRYLCOAT 1791-2
					CRYLCOAT 1770-0	
					CRYLCOAT 1781-0	CRYLCOAT 1738-2
200			CRYLCOAT 1630-0	CRYLCOAT 1650-2	CRYLCOAT 1702-0	

Curing Temperature °C	TGIC		HAA	URETHANE
Outdoor				
180	CRYLCOAT 2450-2	CRYLCOAT 2476-2		
190	CRYLCOAT 2440-2		CRYLCOAT 2670-3	CRYLCOAT 2868-0
			CRYLCOAT 2671-3	
200	CRYLCOAT 2441-2	CRYLCOAT 2441-3	CRYLCOAT 2427-2	• CRYLCOAT 4891-0
	CRYLCOAT 2431-0	CRYLCOAT 2452-2		• CRYLCOAT 4874-0
	CRYLCOAT 2413-2	CRYLCOAT 2416-2		
	CRYLCOAT 2427-2	CRYLCOAT 2470-2		
	CRYLCOAT 2486-2	CRYLCOAT 2491-2		
	CRYLCOAT 2406-2	CRYLCOAT 2691-2		
		CRYLCOAT 2491-2		

• Super Durable

Special

Curing Temperature °C	50/50
Mdf	
130-140	CRYLCOAT 1501-6
	CRYLCOAT 1551-6
	CRYLCOAT 1506-6
	CRYLCOAT 1545-6
	CRYLCOAT 1581-6

Curing Temperature °C	TGIC
High Heat Resistance	
200	CRYLCOAT 2488-5

Curing Temperature °C	TGIC
Coil Coating	
180	CRYLCOAT 2492-2

Hybrid

Product Name	Overbake stable	Tribo	Cure T, °C	Tg, °C	AV	Viscosity, mPa.s	Characteristics
Hybrid 50/50							
CRYLCOAT 1501-6			130	52	69	5500 (175°C)	Reactive good flow, suitable for smooth finishes.
CRYLCOAT 1506-6			140	62	69	9000 (175°C)	Fast cure resin for metal application.
CRYLCOAT 1510-0			180	62	71	8650 (175°C)	Excellent flow, high gloss with good wettings of fillers and pigments.
CRYLCOAT 1540-0			160	58	71	8750 (175°C)	Good balance of properties and good pigment wetting.
CRYLCOAT 1545-6			130	66	72	8200 (175°C)	Low bake, Tin-free, high Tg resin for MDF coating with good mechanical and physical aging stability.
CRYLCOAT 1551-6			140	51	71	5000 (175°C)	Reactive best flow, for smooth finishes, enhanced over-bake resistance.
CRYLCOAT 1573-0			180	56	70	3500	General purpose resin with good compromise between flow and reactivity.
CRYLCOAT 1577-0			180	60	70	2800	Affordable resin with good flow out, good matting efficiency.
CRYLCOAT 1581-6			130	52	70	5000	Low bake resin for MDF coatings with high gloss finish.
CRYLCOAT 1593-0			160	54	70	3500	Low bake, good flow-gloss balance.
Hybrid 60/40							
CRYLCOAT 1616-2	*		200	62	48	3750	General purpose resin with a high Tg and excellent flow.
CRYLCOAT 1620-0			170	54	60	2650	Excellent balance between reactivity and flow.
CRYLCOAT 1622-0			200	55	60	2500	Very good properties and excellent flow. Suitable for use with matting hardeners.
CRYLCOAT 1626-0			180	52	48	3000	New generation hybrid, excellent flow and very good gloss.
CRYLCOAT 1627-0			180	62	44	4000	General purpose resin. High Tg resin with good flow and pigment wetting properties.
CRYLCOAT 1630-0			200	59	62	3000	Low reactive with good storage stability.
CRYLCOAT 1631-0			170	62	62	3000	High Tg resin with very good properties and flow.
CRYLCOAT 1648-2	*		180	60	45	4000	Economic general purpose resin with outstanding boiling water resistance.
CRYLCOAT 1650-2	*		200	55	50	4250	Resin with good response to matting agent.
CRYLCOAT 1660-0			200	50	48	9400 (175°C)	Low reactivity, good flexibility and excellent flow with high filler loading.
CRYLCOAT 1683-0			200	73	50	4700	Resin with excellent solvent resistance.
CRYLCOAT E 04759			160	62	45	4600	High reactivity, good flow, alkaline resistance and mechanical properties.
CRYLCOAT E 04948			180	63	50	3500	TMA-free, excellent flow and gloss with very good chemical resistance and matting efficiency.
Hybrid 70/30							
CRYLCOAT 1701-0			170	62	36	6300	High Tg resin with good balance of properties. Suitable for fast cure or low temperature cure.
CRYLCOAT 1702-0			200	62	36	5300	Very slow resin with outstanding flow. Uncatalysed version of CRYLCOAT 1701-0.
CRYLCOAT 1703-1		*	180	56	34	4800	Tribo active and very good balance of properties. Excellent overbake resistance.
CRYLCOAT 1716-0			180	60	30	6500	Very good flow with very high gloss, can be used for matte coatings.
CRYLCOAT 1732-0			160	57	35	5500	Low bake, good flow combinded with flexibility and mechanical aging stability.
CRYLCOAT 1738-2	*		180	60	35	5500	Affordable grade, good for smooth matte or structure finish or texture finish.
CRYLCOAT 1770-0			180	58	34	5400	Very good balance of properties.
CRYLCOAT 1781-0			180	63	33	5000	General purpose resin. High Tg resin with excellent flow out.
CRYLCOAT 1791-2	*		180	59	33	5000	For high gloss coatings with good mechanicals, gas-oven stabilized.
CRYLCOAT E 04811			180	60	33	4800	R-PET version of Crylcoat 1781-0 with excellent storage stability and flow out.

TGIC

Product Name	Overbake stable	Tribo	Cure T, °C	Tg, °C	AV	Viscosity, mPa.s	Ratio	Characteristics
Full Gloss System								
Exterior								
CRYLCOAT 2406-2	*		200	67	28	6200	94/6	Affordable resin for Industrial.
CRYLCOAT 2421-5			180	63	33	5200	93/7	Resin developed for use in coil or PCM.
CRYLCOAT 2425-0			190	71	34	6250	93/7	High Tg resin with good balance of properties.
CRYLCOAT 2427-2	*		200	63	25	6500	95/5	Low HAA content with excellent flow, good chemical resistance.
CRYLCOAT 2435-6			160	62	35	3000	93/7	Low bake with excellent blooming resistance.
CRYLCOAT 2451-6			130	53	40	1800	92/8	Low bake with low viscosity providing the combination of excellent flexibility and adhesion, including film hardness.
CRYLCOAT 2468-5			200	68	34	8000	93/7	Good structure finish, good matting efficiency with matting wax.
CRYLCOAT 2473-4	*		170	63	33	3250	93/7	Optimized flow and transparency at a low temperature.
CRYLCOAT 2486-2	*		200	65	60	4500	94/6	Affordable resin for Industrial, good flow, good flexibility in high gloss application with excellent matting efficiency and blooming resistance.
CRYLCOAT 2488-5	*		200	59	32	4000	93/7	High heat resistance resin.
CRYLCOAT 2498-0			190	68	34	8000	93/7	High Tg resin, 93/7 TGIC system with good mechanical ageing.
CRYLCOAT 2499-6			160	64	30	4750	93/7	Low bake formulations with improved flow out, storage stability and less blooming.
CRYLCOAT E 04417			200	62	32	4000	93/7	TGIC resin with improved corrosion resistance.
CRYLCOAT E 04431			140	59	30	4000	93/7	Low bake with very high reactivity for general industry.
Durable								
CRYLCOAT 2411-2	*		200	63	30	5250	93/7	Improved mechanical aging and chemical resistance with good flow 93/7 TGIC resin.
CRYLCOAT 2416-2	*		200	67	29	6500	94/6	Affordable resin for Architectural with low TGIC content.
CRYLCOAT 2418-2	*		200	69	32	5000	93/7	Outstanding flow with broader curing window.
CRYLCOAT 2419-2	*		200	62	23	7250	95/5	Improved version of CRYLCOAT 2496-2 in gas-oven and overbake resistance.
CRYLCOAT 2437-2	*		200	62	33	3900	93/7	TMA free resin with outstanding flow. Excellent outdoor durability, stabilized for direct fired gas oven.
CRYLCOAT 2440-2	*		190	67	33	5050	93/7	Slightly accelerated version of CRYLCOAT 2441-2.
CRYLCOAT 2441-2	*		200	67	33	5050	93/7	General purpose resin with high Tg and excellent balance of properties.
CRYLCOAT 2441-3	*	*	200	67	33	4600	93/7	General purpose resin with high Tg. Tribo version of CRYLCOAT 2441-2.
CRYLCOAT 2450-2	*		180	67	33	5050	93/7	General purpose resin with high Tg. Accelerated version of CRYLCOAT 2441-2.
CRYLCOAT 2462-2	*		200	63	34	4750	93/7	Architectural grade with improved boiling water resistance.
CRYLCOAT 2476-2	*		180	67	29	7300	94/6	Affordable resin, high reactive version of CRYLCOAT 2416-2.
CRYLCOAT 2478-1		*	200	64	34	4750	93/7	General purpose for architectural, can be used for sand texture.
CRYLCOAT 2496-2	*		200	62	23	7250	95/5	Low TGIC content with improved mechanical aging, good corrosion resistance.
CRYLCOAT E 04809	*		200	63	28	5000	94/6	Qualicoat class 1.5 or architectural plus for dual chemistry.
Super Durable								
CRYLCOAT 4404-0	*		160	63	39	3000	93/7	High clarity with improved corrosion resistance.
CRYLCOAT 4432-4			200	62	35	2350	93/7	Superdurable resin with an excellent flow and transparency for clear coat.
CRYLCOAT 4452-0			160	62	32	2000	93/7	Low bake with good flow out, DOI and smoothness.
CRYLCOAT 4478-0			200	64	32	3300	93/7	Good edge coverage and combine good flow and outstanding outdoor weathering resistance.
CRYLCOAT 4488-0			200	64	30	5450	93/7	Resin with excellent weathering performance, withstanding 10 years Florida exposure.
CRYLCOAT E 04484	*		200	65	32	5700	93/7	High clarity, good flow-out with improved corrosion resistance.
Matte Dry Blend System (MDB)								
Exterior, Durable								
CRYLCOAT 2413-2	*		200	70	52	7000	90/10	High hardener demand for MDB in combination with CRYLCOAT 2470-2 or CRYLCOAT 2670-3 or CRYLCOAT 2452-2 for G20-25.
CRYLCOAT 2431-0			200	68	50	4500	90/10	High hardener demand for MDB in combination with CRYLCOAT 2470-2 or CRYLCOAT 2670-3 or CRYLCOAT 2452-2 for G25-30.
CRYLCOAT 2452-2	*		200	60	22	8000	96/4	Low hardener demand for MDB in combination with CRYLCOAT 2431-0 for G30.
CRYLCOAT 2470-2	*		200	58	22	6300	96/4	Low hardener demand for MDB in combination with CRYLCOAT 2413-2 or CRYLCOAT 2431-0 for G20-35.
CRYLCOAT 2490-2	*		200	69	47	4850	90/10	High hardener demand for MDB in combination with CRYLCOAT 2470-2 or CRYLCOAT 2670-3 or CRYLCOAT 2452-2 for G35-40.
CRYLCOAT 2491-2	*		200	62	22	7600	96/4	Low hardener demand in TGIC and Primid (96.5/3.5), slow component in MDB systems.
CRYLCOAT 2670-3		*	200	61	22	6800	96/4	Low hardener demand for MDB in combination with CRYLCOAT 2413-2 or CRYLCOAT 2431-0 for G20-35.
CRYLCOAT 2691-2	*		200	62	21	7600	96.5/3.5	Low hardener demand for MDB in combination with CRYLCOAT 2413-2 or CRYLCOAT 2431-0 or CRYLCOAT 2490-2 for G20-40.
Super DurableZ								
CRYLCOAT 4420-0			200	64	52	5550	90/10	Fast component for MDB in combination with CRYLCOAT 4430-0 or CRYLCOAT 4430-5.
CRYLCOAT 4430-0			200	62	35	2000	93/7	Resin with excellent flow. It can be used with CRYLCOAT 4420-0 for MDB G30-35.
CRYLCOAT 4430-5	*		200	64	30	3500	93/7	Excellent flow, good overbaking resistance. It can be used with CRYLCOAT 4420-0 for MDB G30-35, offers good gloss stability and appearance (haziness and flow) during storage.

HAA

Product Name	Gas Oven stable	Overbake stable	Blooming resistance	Tribo	Cure T, °C	Tg, °C	AV	Viscosity, mPa.s	Ratio	Characteristics
Full Gloss system										
Exterior										
CRYLCOAT 2608-6			*		160	60	33	4000	95/5	Low bake with broad cure window, good flow, improved storage stability and blooming resistance.
CRYLCOAT 2630-2	*	*			180	62	33	3450	95/5	Resin with excellent flow and degassing properties. Gas oven stabilised and non tribo version of CRYLCOAT 2617-3.
CRYLCOAT 2655-6	*	*		*	150	58	48	6000	93/7	Low bake Primid resin. possible to blens with CRYLCOAT 4655-2 to balance weathering and reactivity.
CRYLCOAT 2684-4	*	*			180	58	21	9250	96/4	Excellent flow, good outdoor durability and do not require and flow promoter.
CRYLCOAT 2695-0					180	59	25	5500	96/4	General purpose resin for low Primid demand formulations (96/4). Slow reacting component in low gloss (15% G60) One Shot Matte formulations.
CRYLCOAT 2696-6	*	*	*	*	160	60	37	4000	94/6	Fast cure resin for industrial use, good overall properties.
CRYLCOAT E 04339	*	*			180	65	31	4200	95/5	Polyester HAA for Induatrial application with improved corrosion resistance.
Durable										
CRYLCOAT 2606-3	*	*		*	180	66	33	4500	95/5	High Tg resin with improved water spot resistance, enhanced architectural application.
CRYLCOAT 2609-6	*	*	*	*	160	60	31	5000	95/5	Blooming resistant, improved outdoor durability and water-spot resistance.
CRYLCOAT 2666-3	*	*	*	*	180	58	30	3800	95/5	Tribo resin for enchanced architectural application, very good flow and improved water spot resistance.
CRYLCOAT 2618-3	*	*		*	180	61	33	3100	95/5	Tribo active resin with excellent weathering resistance and suitable for use in gas ovens.
CRYLCOAT 2640-3	*	*		*	180	60	21	7250	96/4	Combined good mechanical with outstanding outdoor durability for low demand Primid for architectural application.
CRYLCOAT 2653-3		*		*	180	64	33	3500	95/5	Improved corrosion resistance for dual chemistry, architectural use.
CRYLCOAT 2654-2	*	*	*		180	57	30	2800	95/5	Good degassing property with excellent flow, improved storage stability and excellent outdoor durability.
CRYLCOAT E 04809	*	*	*		180	63	28	5000	96/4	Qualicoat class 1.5 or architectural plus for dual chemistry.
Super Durable										
CRYLCOAT 4627-2	*	*	*		200	58	33	1500	95/5	Excellent outdoor resistance combined with improved corrosion resistance.
CRYLCOAT 4642-3	*	*	*	*	200	62	35	1900	95/5	Superdurable resin withstanding 5 years Florida exposure.
CRYLCOAT 4643-3	*	*	*	*	160	62	50	1800	92/8	Low bake 92/8 superdurable resin.
CRYLCOAT 4655-2	*	*	*		160	66	31	8000	95/5	Low bake suitable for texture Primid and can combine with CRYCOAT 2655-6 to balance blooming resistance, outdoor durability and reactivity.
CRYLCOAT 4659-0			*		190	59	33	3700	95/5	Superdurable resin with some flexibility and good adhesion. It can be used in HAA and TGIC formulations.
CRYLCOAT 4688-2	*	*	*		190	55	31	5500 (175°C)	95/5	Superdurable resin with good flexibility and excellent flow. Suitable for ACE applications.
CRYLCOAT 4698-2		*	*		190	61	31	2400	95/5	Improved flexibility Superdurable resin with compromised on storage stability.
CRYLCOAT E 03525	*	*	*		180	58	30	4000	95/5	Enhanced durability for clear coat.
CRYLCOAT E 37578	*	*	*		140	57	30	7500	95/5	Low bake superdurable resin with good flexibility.
Matte Dry Blend and One Shot Matte system (MDB and OSP)										
Exterior, Durable										
CRYLCOAT 2635-2		*			200	57	85	3000	(blank)	Fast reacting component in both medium gloss and low gloss OSP formulations.
CRYLCOAT 2650-3	*	*		*	190	51	70	6200 (175°C)	90/10	For MDB (Gloss 20-25%) in combination with CRYLCOAT 2670-3. The resin has an optimised weathering resistance.
CRYLCOAT 2670-3	*	*		*	190	61	22	6800	97/3	For (co-grindable) MDBs in combination with high-demand Primid systems. The resin has an optimised weathering resistance.
CRYLCOAT 2671-3	*	*		*	190	58	48	5800	93/7	For MDB formulations (Gloss 35%) with CRYLCOAT 2670-3. The resin has an optimised weathering resistance.
CRYLCOAT 2691-2		*			200	62	21	7600	97/3	For MDB or use alone for low demand Primid resin. Slow reacting component in low gloss (10% G60) OSP formulations with CRYLCOAT 2635-2.
CRYLCOAT 2668-6	*	*		*	160	60	18	12000	97/3	Resin tribo active for MDB low bake to be used in combination with CRYLCOAT 2693-6 for G20-25.
CRYLCOAT 2693-6	*	*		*	160	60	54	11000	93/7	Resin tribo active for MDB low bake to be used in combination with CRYLCOAT 2668-6 for G20-25.
CRYLCOAT 2668-3	*	*		*	200	60	18	7000	97/3	Resin tribo active for MDB to be used in combination with CRYLCOAT 2693-3 for G20-25.
CRYLCOAT 2693-3	*	*		*	200	60	55	8000	93/7	Resin tribo active for MDB to be used in combination with CRYLCOAT 2668-3 for G20-25.
Super Durable										
CRYLCOAT 4420-0			*		200	64	52	5550	92/8	Fast component for MDB in combination with CRYLCOAT 4641-0.
CRYLCOAT 4641-0			*		200	60	20	4250	97/3	Slow component for MDB in combination with CRYLCOAT 4420-0.
CRYLCOAT 4651-0			*		200	59	20	4250	(blank)	Slow reacting component in dull matte OSP formulations.
CRYLCOAT 4679-0		*	*		200	63	70	5000	90/10	High AV partner with CC 4641-0 in MDB superdurable to obtain gloss 20%.
CRYLCOAT 4693-2		*	*		200	58	88	2250	(blank)	Fast reacting component in dull matte OSP formulations.

Urethane

Product Name	Cure T, °C	Tg, °C	IOH, mg KOH/g	Viscosity, mPa.s	Characteristics
Full Gloss system					
Exterior, Durable					
CRYLCOAT 2814-0	200	52	295	3250	High hydroxyl content, providing high hardness, stain resistance, anti-graffiti property.
CRYLCOAT 2818-0	190	58	100	2750	Good solvent resistance. When used with BECKOPOX EH 694, the coatings exhibit excellent thermal resistance and a high Tg.
CRYLCOAT 2839-0	200	57	50	5500	Good flow and resistance properties. Good for clears.
CRYLCOAT 2868-0	190	60	32	6500	High Tg resin with excellent reactivity and flow out.
CRYLCOAT 2883-0	200	61	47	4000	High Tg, excellent flow, high hardness and good outdoor durability.
CRYLCOAT 2890-0	200	60	30	7250	For low demand isocyanate formulations.
CRYLCOAT 2872-0	200	55	40	3700	Good mechanical and chemical resistance.
Super Durable					
CRYLCOAT 4823-0	200	57	85	1900	Good flow, mechanical, chemical and weathering resistance.
CRYLCOAT 4890-0	180	58	30	5000	Superdurable resin with excellent flow.
Matte Dry Blend and One Shot PU system (MDB and OSPU)					
Exterior, Durable					
CRYLCOAT 2860-0	200	52	50	3500	OSPU formulations with CRYLCOAT 2814-0 or CRYLCOAT 2876-0 for G25-30.
CRYLCOAT 2870-0	200	54	45	4500	Excellent weathering resistance and good chemical resistance, can be used for OSPU with high OH functionality resin, CRYLCOAT 2876-0 or CRYLCOAT2814-0 for G15-20.
CRYLCOAT 2876-0	200	58	290	4500	Excellent hardness and stain resistance, suitable for anti-graffiti formulations.
Super Durable					
CRYLCOAT 4874-0	200	52	295	3250	Superdurable resin for OSPU formulation with CC 4891-0 for G10-40.
CRYLCOAT 4891-0	200	58	31	5500	Superdurable resin for OSPU formulation with CC 4874-0 for G10-40.
CRYLCOAT E 04375	200	58	30	5000	Superdurable low OH resin for OSPU formulation with CC E 04362 for G<5.
CRYLCOAT E 04362	200	53	220	3000	Superdurable high OH resin for OSPU formulation with CC E 04375 for G<5.

Product Name	Cure T, °C	Tg, °C	NCO, % w/w		Characteristics
Crosslinker					
ADDITOL P 932	200	47	9-10		Crosslinker for OH-Polyester resins based on an aliphatic structure and suitable for outdoor applications.
ADDITOL P 965	200	51	16-17		Aromatic urethane adduct crosslinker. For indoor applications.

Others

Product Name	Overbake stable	Tribo	Cure T, °C	Tg, °C	AV	Viscosity, mPa.s	Ratio	Characteristics
Polyester Resins For Pt-910 Based Formulations								
Standard Durable Resins								
CRYLCOAT 2501-2	*		200	73	33	9400	91/9	Outstanding flow out and good mechanical properties.
CRYLCOAT 2505-4	*		180	65	33	4500	91/9	Clear coat with outstanding flow and transparency.
CRYLCOAT 2506-1		*	180(15')	67	33	5000	91/9	General purpose for 91/9 stoechiometry with PT-910.
Super Durable Resins								
CRYLCOAT 4540-0			200	67	25	9000	93/7	Superdurable resin with excellent properties.

Product Name	Cure T, °C	Tg, °C	EEW, g/eq	Viscosity, mPa.s	Ratio	Characteristics
Acrylic Resins And Related Products						
Gma Acrylic Resins For Low Gloss Formulations						
SYNTHACRYL 700	200(15')	80	750	39000		Co-resin for the production of dead matt coatings with CRYLCOAT 2441-2.

Product Name		Tg, °C	OH, mg KOH/g			Characteristics
Crosslinker						
ADDITOL P 791		90 (Tm)	310			Aliphatic polyanhydride crosslinker for use with GMA-acrylic resins. The resin is not available at large quantities.
BECKOPOX EH 694		52	275			Anhydride hardener for use with solid epoxy resins or OH polyester or an additional crosslinker of epoxy/polyester hybrid system. Formulations exhibit chemical and overbake resistance.

Product Name	Cure T, °C	Tg, °C	OHV, mg KOH/g	Viscosity, mPa.s		Characteristics
Polyester Resin For Wrinkle Finish						
CRYLCOAT 2920-0	200	67	33	12700		For wrinkle finishes in combination with ADDITOL P 920.
ADDITOL P 920			42	8500		Catalyst master batch for wrinkle finish with CRYLCOAT 2920-0.

Product Name	Cure T, °C	Tg, °C	OHV, mg KOH/g	Viscosity, mPa.s		Characteristics
Polyester Resin For Special Purposes, And Cleaning Extruder						
CRYLCOAT 9209-0	N/A	58	37	34000		High viscosity resin suitable for cleaning material in extruder.
CRYLCOAT 9240-0	N/A	58	37	24000		High viscosity resin suitable for cleaning material in extruder.
CRYLCOAT 9246-0	N/A	62	35	12000		Organic filler for epoxy powder coating or as cleaning material in extruder.
CRYLCOAT 9292-0	180	58	40	4500		Organic filler for epoxy powder coating.

Product Name	Cure T, °C	Tg, °C	OHV, mg KOH/g	Viscosity, mPa.s		Characteristics
Semi-crystalline Polyester Resin For Flexibilizer						
ADDITOL E 04707	N/A	110	35	350 (125°C)		OH-terminated Polymeric flexibilizer to improved flexibility in superdurable polyurethanes.
ADDITOL E 04907	N/A	113	31 (AV)	980 (125°C)		COOH-terminated Polymeric flexibilizer to improved flexibility in superdurable TGIC and HAA system.

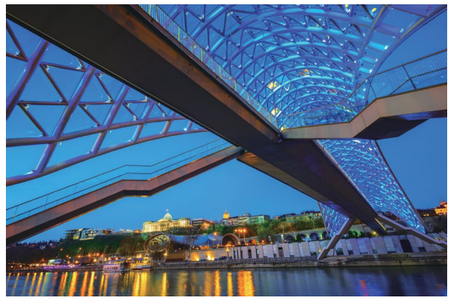
Master Batches Flow

Product Name	Tg, °C	OHV	AV	Viscosity, mPa.s	Characteristics
Master Batches					
Catalyst Master Batches					
ADDITOL P 963			33	3000	A 5% active catalyst master batch for carboxylic acid/epoxy reaction for use in Hybrid, TGIC and Aradite™ PT-910 system.
ADDITOL P 964			33	3200	A 5% active catalyst master batch for carboxylic acid/epoxy reaction for use in Hybrid, TGIC and Aradite™ PT-910 system.
ADDITOL P 966			35	1900	A 5% active catalyst master batch in super durable resin carrier for use in TGIC and Aradite™ PT-910 system.
ADDITOL P 920			42	8500	Catalyst master batch for wrinkle finish with CRYLCOAT 2920-0.
Flow Master Batches					
ADDITOL P 891	56		35	2300	Flow promoter master batch with 5% active substance. 7-10% on binder is recommended. No haze. Suitable for clearcoats.
ADDITOL P 824	49	45		1200	Flow promoter master batch with 15% active substance. 3-5% on total formulation weight for pigmented powders. Excellent gloss and flow.
ADDITOL P 896	57	45		1800	Flow promoter master batch with 15% active substance. 3-5% on total formulation weight for pigmented powders.
ADDITOL E 04826	57	50	8	N/A	Flow promoter master batch with 10% active substance. 7-8% on binder is recommended. No haze. Suitable for clearcoats.
Tribo Master Batches					
ADDITOL P 950		30		7500	Tribo master batch with 5% active substance.

Product Name	Appearance	Activity %	Density g/ml	Characteristics
Flow Promoter				
MODAFLOW POWDER III	Free flowing powder	65	0.58-0.64	Improves leveling and flow out, reduces surface defects, improves substrate wetting and initial adhesion.
MODAFLOW POWDER 6000	Free flowing powder	65	0.58-0.64	Improves leveling and flow out, reduces surface defects and broadens cross compatibility between different powder coatings.
MODAFLOW POWDER 3000	Free flowing powder	65	0.58-0.64	Improves leveling and flow out, reduces surface defects. Affordable grade.

UV Powder

Product Name	Tg °C	Viscosity, mPa.s	Characteristics
Unsaturated Polyester Resins For Uv-powder Formulations			
Resins For Metal Applications			
UVECOAT 2100	57	5500	High Tg resin for metal application with good adhesion up to 70µm.
UVECOAT 2200	54	4500(175°C)	For metal application with excellent outdoor durability.
Resins For Wood Applications			
UVECOAT 3001	44	2500(175°C)	For indoor application such as MDF and sandable primers.
UVECOAT 3005	48	4000	For texture finishes for MDF applications. Very good chemical and scratch resistances.
Resins For Resilient Flooring Applications			
UVECOAT 3003	49	3500(175°C)	For resilient flooring applications. Excellent scratch and chemical resistances.
Additives And Co-resins For Uv-powder Applications			
UVECOAT 9010	85 (Tm)	350(100°C)	Semi-crystalline resin to improve flow and flexibility.
UVECOAT 9146	55	55000(140°C)	Additive to improve hardness and scratch resistance. Unsaturated urethane acrylate for use as a cross-linker in UV powder coating.
UVECOAT 9539	44	4000	Unsaturated Polyester resin providing excellent adhesion as sole binder or combination partner for other UVECOAT resins at metal application.
TONERS			
UVECOAT E 04606	51	4200(200°C)	A tin-free amorphous acrylated polyester resin for toner application.
UVECOAT E 04666	50	5500(140°C)	A tin-free aliphatic unsaturated acrylic urethane polymer with increased reactivity for toner application.

Notes