

DELTA specialties

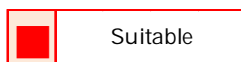
Issue 5, 2011



Product Selection Guide  
SPECIALTY ADDITIVES & DRIERS

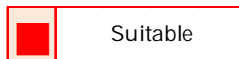
# SPECIFICATIONS & SUITABILITY BY INDUSTRY

Product name	Chemical type	Application/Usage	Dosage	Solvent-based	Water-based	Coatings	Graphic arts	Composite
DELTA-FC® 1020	Silicone-free defoamer	Thermoplastic acrylics. Acid-curing wood finishes. Unsaturated polyesters and cold-curing epoxy systems. Nitrocellulose- and polyamide-based gravure and flexographic printing inks. Gel coats, laminating, lay-up and spray-up	0.05-0.7%					
DELTA-FC® 1021	Silicone-free defoamer	Polyurethane coatings. Acid-curing wood finishes and coatings. Air-drying and stoving paints. Transportation coatings. UV curable screen, gravure and flexographic printing inks	0.5-2.0%					
DELTA-FC® 1022	Silicone-based defoamer	Two-pack systems based on polyurethane and epoxy resins. Stoving enamels based on alkyd resins or saturated polyesters. Air-drying industrial coatings based on medium-oil alkyd resins. Thermoplastic acrylics. Nitrocellulose-based gravure and flexographic printing inks	0.2-1.0%					
DELTA-FC® 1040	Silicone-based defoamer	All kinds of Industrial and decorative finishes given its high compatibility (excellent for transparent systems). Nitrocellulose- and polyamide-based gravure and flexographic printing inks	0.1-0.7%					
DELTA-FC® 1501	Silicone-free defoamer (mixture of mineral oils and hydrophobic components in hydrocarbon carrier)	It is characterized by having a long-lasting defoaming effect in different synthetic latex and emulsion systems based on styrene-butadiene, acrylic and polyvinyl acetate	0.1-1.0%					
DELTA-FC® 1521	Silicone-free defoamer (mixture of mineral oils and hydrophobic components in hydrocarbon carrier)	It controls the foaming tendency of surfactants in water-based coating and ink formulations (mill-base and let-down) especially those based on styrene-butadiene, polyvinyl acetate, acrylic and water-soluble alkyds. It can be also effective in the ceramic and paper industries and rubber/latex formulations	0.1-1.0%					
DELTA-FC® 1522	Silicone-free defoamer (mixture of mineral oils and hydrophobic components in hydrocarbon carrier)	It controls the foaming tendency of surfactants in water-based coating and ink formulations (mill-base and let-down) especially those based on styrene-butadiene, polyvinyl acetate, acrylic and water-soluble alkyds	0.1-1.0%					
DELTA-FC® 1525	Silicone-based defoamer (Silicone-based emulsion with non-ionic surfactants)	It controls the foaming tendency of surfactants during dispersion and further processing in water- and glycol-based pastes and universal colorants. Due to its excellent stability during grinding stage, it is a perfect choice for universal colorants (along with DELTA-S® 5225)	0.1-1.0%					
DELTA-FC® 1720	Silicone-free anti-foam	Unsaturated polyesters. Two-pack epoxies and solvent-free epoxy floorings. Acrylic/vinylacetate-combinations. Oil-free polyesters. UV curable screen, gravure and flexographic printing inks	0.1-1.0%					
DELTA-FC® 1722	Silicone-based anti-foam	Solvent-free epoxy floorings and room temperature curing unsaturated polyesters. Thin layer (gel coats) and casting systems	0.3-1.5%					
DELTA-FC® 1723	Silicone-free air-releaser	Unsaturated polyester and epoxy resins	0.1-0.5%					













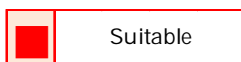
# SPECIFICATIONS & SUITABILITY BY INDUSTRY

Product name	Chemical type	Application/Usage	Dosage	Solvent-based	Water-based	Coatings	Graphic arts	Composite
DELTA-SC® 2030	Silicone-based surface control additive	Slip and levelling agent for all kinds of solvent-based matt systems. Also suitable for water-based systems. Effective anti-cratering agent for polyurethane systems. Good for speeding up the wetting of pigments in the grinding stage	0.1-1.0%	■	■	■	■	
DELTA-SC® 2031	Silicone-based surface control additive	Wood finishes based on unsaturated polyesters, polyurethane and nitrocellulose. Very suitable for wood and metal coatings. Nitrocellulose- and polyamide-based flexographic printing inks. UV-curable over-print varnishes	0.1-0.3%	■		■	■	
DELTA-SC® 2033	Cost-effective silicone-based surface control additive	All kinds of clear coatings such as two-pack PU and acid curing systems. Nitrocellulose-based flexographic printing inks	0.1-1.0%	■		■	■	
DELTA-SC® 2034	Silicone-based surface control additive (with fluoro-carbon modification)	Anti-cratering agent "par excellence" for all kinds of solvent-based and aqueous coatings	0.05-0.5%	■	■	■	■	
DELTA-SC® 2035	Silicone-based surface control additive	It prevents curtain-rupture in curtain coating applications. All kinds of water- and solvent-based coatings (better compatibility in polar systems). Unstaurated polyester and epoxy resins	0.1-0.5%	■	■	■		■
DELTA-SC® 2230	Silicone-based surface control additive	100% active slip and levelling agent for all kinds of solvent-based matt systems. Effective anti-cratering agent for polyurethane systems. It is compatible with a broad range of formulation polarities. It may be used in water-based, solventbased and UV-curable printing inks and OPV	0.05-0.15%	■	■	■	■	
DELTA-SC® 2231	Silicone-based surface control additive	This 100% active surface control additive is compatible with all medium- to high-polarity solvent-based systems. Wood finishes based on unsaturated polyesters, polyurethane and nitrocellulose. Wood and metal coatings. Nitrocellulose- and polyamide-based flexographic printing inks. UV-curable OPV	0.05-0.15%	■		■	■	
DELTA-SC® 2236	Silicone-based surface control additive (Alkyl-modified)	Stoving enamels based on alkyd-, acrylic- or polyester resins. Acid cured- or polyurethane- wood finishes particularly when applied by curtain coating. Self-levelling epoxy flooring compounds. UV-curable paper lacquers and air drying alkyd systems. 100% active	0.05-0.5%	■		■		
DELTA-SC® 2239	Silicone-based surface control additive (Alkyl-modified)	Acid-curable or polyurethane wood finishes. Stoving enamels based on alkyd, acrylic or polyester resins. Self-levelling epoxy flooring compounds. UV-curable paper lacquers. PVC plastisols and unsaturated polyesters. Solvent-free epoxy systems (e.g. flooring, conductor plates) and polyurethanes	0.05-0.5%	■		■		■
DELTA-SC® 2570	Neutralized fluorocarbon modified polyacrylate (For water-based systems)	Levelling and anti-cratering agent for all kinds of aqueous coatings and printing inks with a pH value > 9. It gives excellent anti-cratering behaviour, better substrate wetting, improved levelling with no intercoat adhesion problems	0.5-1.5%		■	■	■	
DELTA-SC® 2580	Silicone-based surface control additive (For water-based systems)	It gives excellent anti-cratering behaviour and leveling, better substrate wetting with no inter-coat adhesion problems in multi-layer applications. It has little or no foam stabilization. Very suitable for the preparation of let-down varnishes for water-based inks as it greatly reduces the surface tension	0.1-1.0%		■	■	■	



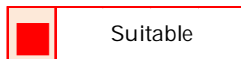
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Product name	Chemical type	Application/Usage	Dosage	Solvent-based	Water-based	Coatings	Graphic arts	Composite
DELTA-SC® 2772	Silicone-free surface control additive	Similar to DELTA-SC® 2777 but with less fluor content in the acrylic polymer. Suitable for water-based applications if properly neutralized	0.2-2.0%					
DELTA-SC® 2777	Silicone-free surface control additive	Stoving enamels based on alkyd, acrylic and polyester resins. PU and coil coatings. Two-pack epoxy compounds. Air-dried alkyd systems. Free-radically and cationically mediated UV-curable printing inks and over-print varnishes. Flexographic, screen and offset applications to difficult substrates	0.4-2.0%					



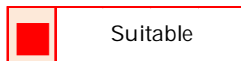
# SPECIFICATIONS & SUITABILITY BY INDUSTRY

Product name	Chemical type	Application/Usage	Dosage	Solvent-based	Water-based	Coatings	Graphic arts	Composite
DELTA-DC® 3009	Cost-effective polymeric dispersion control additive (Polyurethane-based)	This is a very cost-effective polymeric dispersion control additive. It can be used in all types of solvent-based industrial and architectural coatings. Ideal for the preparation of universal colorants for general industrial coatings	10% of OA*, 30-50% of BET* and 15-25% of DBP*	■		■		
DELTA-DC® 3010	Polymeric dispersion control additive (Polyurethane-based)	It is polymeric dispersant for stabilizing inorganic pigments and matting agents, carbon blacks and many organic pigments in all kinds of solvent-based paints from high performance industrial coatings to normal decorative paints	5-10% of OA*, 20-40% of BET* and 30-60% of DBP*	■		■		
DELTA-DC® 3011	Cost-effective polymeric dispersion control additive (Polyurethane-based)	This is a very cost-effective polymeric dispersion control additive. It can be used in all types of solvent-based industrial and architectural coatings. Ideal for the preparation of universal colorants for general industrial coatings	10% of OA*, 30-50% of BET* and 15-25% of DBP*	■		■		
DELTA-DC® 3046	Polymeric dispersion control additive (Polyurethane-based)	General industrial coatings. Automotive coatings and all kinds of solvent-based coatings. Pigment concentrates	10% of OA*, 30-50% of BET* and 15-25% of DBP*	■		■		
DELTA-DC® 3047	Polymeric dispersion control additive with higher molecular weight (Polyurethane-based)	Transportation coatings (OEM and car refinish). All kinds of solvent-based coatings. Pigment concentrates. UV-curable formulations. Screen and gravure printing inks. Excellent for the preparation concentrates for unsaturated polyesters. Composite	10% of OA*, 30-50% of BET* and 15-25% of DBP*	■		■		■
DELTA-DC® 3401	Polymeric dispersion control additive (Polyacrylate-based)	All kinds of high quality solvent-based industrial coatings (Mainly high polar systems). Automotive topcoats. Pigment concentrates. Coil coatings. UV-curable, screen and gravure printing ink formulations	10% of OA*, 30-50% of BET* and 15-25% of DBP*	■		■	■	
DELTA-DC® 3590	Polymeric dispersion control additive (Polyacrylate-based)	Wide-spread compatibility in most commonly used water-based coatings. It can be used exclusively as a dispersing agent or to produce pigment concentrates for ultra-low VOC industrial coatings. Water-based pigment bases and printing inks for flexographic applications	10% of OA*, 30-50% of BET* and 15-25% of DBP*		■	■	■	
DELTA-DC® 4001	Wetting and dispersing additive with anti-settling properties	Primers and undercoats. Anti-corrosion and marine paints based on alkyds, chlorinated rubber, and bituminous derivatives. All kinds of oil- or alkyd based coatings, wash or shop primers and waterborne systems	0.5-2.0% on inorganic pigments. 30.0-50.0% on the Bentonites	■	■	■		
DELTA-DC® 4002	Cost-effective wetting and dispersing additive	It is well-suited for the production of pigment concentrates based on long-oil alkyds for the tinting of long-oil alkyd paints. Very cost effective dispersant for the stabilization of difficult pigments (even organic and carbon black pigments) in low-end paints (mostly alkyds)	0.25-2.0% (delivery form) upon total formulation weight	■		■		
DELTA-DC® 4010	Anionic conventional dispersion control additive	General industrial coatings. Transportation coatings (OEM and car refinish). Acid-catalyzed systems (e.g. coil coatings). PU sanding sealers (e.g. wood coatings). Filled SMC (sheet moulding compounds) and BMC (bulk moulding compounds)	5.0-10.0% on inorganic pigments, 1.0-5.0% on TiO <sub>2</sub> and extenders	■		■		■
DELTA-DC® 4010 M	Anionic conventional dispersion control additive	Similar to DELTA-DC® 4010 but with much higher acid value making it very suitable for the dispersion of transparent iron oxides and extenders. It can be used in all applications in which DELTA-DC® 4010 is recommended.	5.0-10.0% on inorganic pigments, 1.0-5.0% on TiO <sub>2</sub> and extenders	■		■		■



# SPECIFICATIONS & SUITABILITY BY INDUSTRY

Product name	Chemical type	Application/Usage	Dosage	Solvent-based	Water-based	Coatings	Graphic arts	Composite
DELTA-DC® 4040	Wetting and dispersing additive for fillers and extenders and TiO <sub>2</sub>	Particularly suited for filled unsaturated polyester systems (sheet and bulk moulding compounds, gelcoats and car putties). It improves wetting and incorporation of extenders, reduces viscosity of the paste/compound allowing increased extender load	1.0-4.0% (delivery form) on TiO <sub>2</sub> and extenders					
DELTA-DC® 4044	Universal conventional dispersion control additive	Compatible with all solvent and solvent-free coating systems. It provides excellent activation of organically treated Bentonites (pre-gel preparation). Filled SMC (sheet moulding compounds) and BMC (bulk moulding compounds)	0.2-2.0% on inorganic pigments and 30.0-50.0% on the Bentonites.					
DELTA-DC® 4054	Conventional dispersion control additive	Air-drying alkyds. Chlorinated polymers. Epoxies. Alkyd/amino resin combinations	0.5-2.0% on inorganic pigments. 30.0-50.0% on the Bentonites					
DELTA-DC® 4065	Dispersion control additive (effective in preventing flooding of TiO <sub>2</sub> in combination with other color	Nitrocellulose systems. Alkyd/amino resin combinations. PU and chlorinated polymer systems. Acrylic polyisocyanate systems. Nitrocellulose-based flexographic applications and for screen printing inks. Effective with metallic flakes and special effect pigments. Unsaturated polyer systems (Lay-up)	1.0-5.0% on TiO <sub>2</sub> and 1.0-5.0% on special effect flakes					
DELTA-DC® 4066	Similar to DELTA-DC® 4065, but does not contain the organically modified polysiloxane	Nitrocellulose systems, Alkyd/amino resin combinations, Polyurethane and chlorinated polymer systems. Acrylic polyisocyanate systems. Excellent anti-settling for coil coatings	0.5-2.5% on inorganic pigments					
DELTA-DC® 4071	Wetting and dispersing additive with anti-settling properties	Suitable for both low and high polar solvent-based coatings and also for aqueous systems. In wash and shop primers, nitrocellulose primers, primer surfacers and aqueous stains, it is an effective anti-settling additive and prevents hard sedimentation. Also suitable for ink applications	0.3-4.5% upon total formulation					
DELTA-DC® 4110	Anionic conventional dispersion control additive	General industrial coatings. Transportation coatings (OEM and car refinish). Acid-catalyzed systems (e.g. coil coatings). PU sanding sealers (e.g. wood coatings). Filled SMC (sheet moulding compounds) and BMC (bulk moulding compounds)	5.0-10.0% on inorganic pigments, 1.0-5.0% on TiO <sub>2</sub> and extenders					
DELTA-DC® 4207	Multi-purpose conventional dispersion control additive with special chemistry	Multi-purpose additive suitable for any solvent- or solvent-free resin systems. Well-suited for the production of high-solids and aromatic-free architectural paints. Packaging flexographic applications. It improves the co-stabilization of added organic tinting or toning bases (e.g. color acceptance)	0.8-1.5% on TiO <sub>2</sub> , 3.0-5.0% on inorganics and 5.0-9.0% on					
DELTA-DC® 4211	Efficient wetting and dispersing agent for inorganic extenders	It is suited for filled unsaturated polyester systems (SMC and BMC compounds, gelcoats and car putties) or combinations with polystyrene, polyvinylacetate and styrene-butadiene copolymers. Recommended also in highly filled epoxy floorings	0.5-2.0% based on extenders					
DELTA-DC® 4212	Wetting and dispersing additive for solvent-based and solvent-free coatings	General industrial coatings. Transportation coatings. Acid-catalyzed systems (e.g. coil coatings). PU sanding sealers (e.g. wood coatings).unsaturated polyester systems (sheet and bulk moulding compounds, gelcoats and putties) or combination of PS, PVA and SB copolymers (e.g. LS- or LP-	5.0-10.0% on inorganics and 1.0-4.0% on TiO <sub>2</sub> and extenders					
DELTA-DC® 4242	Anionic wetting and dispersing agent for inorganic and organic pigments; and fillers/extendrs	It facilitates the incorporation of fillers and pigments in PVC-Plastisols and solventfree epoxy floorings. It can lead to improved gloss, rheology and levelling of the final ink in ink applications. It can be used in all solvent-based, solvent-free and water-based industrial and decorative coating systems	2.0-4.0% on inorganics and fillers/extendrs 5.0-7.0% on organics					



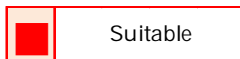
# SPECIFICATIONS & SUITABILITY BY INDUSTRY

Product name	Chemical type	Application/Usage	Dosage	Solvent-based	Water-based	Coatings	Graphic arts	Composite
DELTA-S® 5220	Fatty acid-based polymer (Color acceptance improver)	It is a multi-functional additive as it can be used as well as: Color acceptance improver, dispersant of choice for transparent iron oxides, dispersion control additive for inorganic pigments and extenders in water- and solvent-based systems and dispersant of choice for the preparation of slurries and matting agent dispersions	05.0-10.0% on inorganics and 10.0-20.0% on organics. 0.5-1.5% on total base weight as post additive					
DELTA-S® 5225	Multi-functional fatty-acid based polymer (APE-free)	It is a multi-functional additive as it can be used as well as: Color acceptance improver, sole dispersion control additive for the manufacturing of universal colorants for architectural paints (compatible with emulsion and alkyd paints) and dispersant of choice for transparent iron oxides. It can stabilize all kinds of pigments (Inorganic, Organic and black pigments) and provide excellent rheology and compatibility	05.0-10.0% on inorganics and 10.0-20.0% on organics. 0.5-1.5% on total base weight as post additive					
DELTA-S® 5700	Solution of ketoxime and phosphorous ester salt	Anti-gel agent and viscosity stabilizer for air-drying and stoving coating systems. It delays/prevents thickening, which can occur as a result of oxidation or condensation of the binder. It also reduces the reaction of the pigments with the vehicle. It is usually added prior to grinding, but already gelled materials can be restored to processing viscosity by the addition of DELTA-S® 5700	0.5-1.0% upon total formulation weight					
DELTA-S® 5745	Synergist additive for phthalocyanine and carbon black pigments. Suitable for coatings and printing inks	It is a polar pigment derivative (dyestuff), which is used in conjunction with polymeric dispersants (DELTA-DC® 3000-series) to enable efficient anchoring of the dispersant to the pigment. It is primarily used with certain difficult non-polar organic pigments (Phtalocyanine blue and green pigments) and carbon black pigments, which do not enable good interaction with common dispersant anchoring groups	0.5%-1.0% upon total formulation weight					
DELTA-S® PN	Liquid rheology control additive with a unique thixotropic profile for use in water-based coatings	It builds its thixotropic structure through interaction of its molecules with the reactive groups distributed over the polymer of the latex emulsion or thickener. This interaction occurs through hydrogen and covalent bonding creating a network structure. Upon shear (application), the network structure almost completely breaks. Right after shear removal, the network structure rebuilds again preventing sagging	0.5%-2.0% upon total formulation weight					
MORDRY® 410	Replacement for Cobalt drier (with relatively lower level of toxicity compared to cobalt octoate)	Highly efficient replacement for cobalt drier in urethane-modified alkyds and high-end alkyds. Compared to cobalt octoate, it can offer superior properties such as the minimization of discoloration of clear varnishes in can, improved alkali resistance and increased yellowing resistance of the finishes especially those subjected to prolonged heat or alkaline fumes. It prevents 'loss of dry' on aging	0.5-0.7 kg with 1.0-2.0 kg Ca 10 and 3.5-5.0 kg Zr 12 (upon 100 kg of vehicle solids)					
MORDRY® 410 WD	MORDRY® 410 WD is the water-dispersible version of MORDRY® 410 suitable for water-reducible coatings	It can be efficiently applied in all water-reducible clear-coats and pigmented systems. The product provides rapid surface drying and helps through-drying of the applied film. It provides a homogeneous distribution and therefore a quick drying and most of all good drying stability can be achieved. MORDRY® 410 WD is characterized by being APE-free and easily emulsifiable	0.5-0.7 kg with 1.0-2.0 kg Ca 10 and 3.5-5.0 kg Zr 12 (upon 100 kg of vehicle solids)					
MORDRY® AWD	Cost-effective metal-free accelerator and stabilizer for water-borne coatings	Waterborne coatings are prone to loss-of-dry upon extended storage. These compounds coordinate with the drying metals, specifically Co and Mn, and promote faster drying. This complexing action protects the active metals from hydrolysis over time and minimizes loss-of-dry in the waterborne formulation. This enhanced activity can also be seen in improved water resistance and higher gloss	8 to 17 parts by weight for each part of Co or Mn (as metal)					

Suitable

# SPECIFICATIONS & SUITABILITY BY INDUSTRY

Product name	Description	Symbol	Metal content	Dosage per resin solids
MORDRY® Barium 10 WD	MORDRY® Barium 10 WD is an auxiliary drier for all water-reducible oxidatively drying alkyd paints. Excellent results can be achieved when using MORDRY® Barium 10 WD together with other water-dispersible metal driers such as MORDRY® Cobalt 6 WD, MORDRY® Zirconium 12 WD and MORDRY® Manganese 6 WD. See MORDRY® Barium 12.5 for Barium carboxylates	Ba	10%	0.05%-0.6%
MORDRY® Barium 12.5	Barium carboxylates improve through-drying of a coating and have good pigment wetting characteristics. They also demonstrate lower water sensitivity than Calcium carboxylates. Barium carboxylates improve gloss and prevent adsorption of the primary driers at the surface of the pigments and extenders, thus increasing the stability of the coating during prolonged storage. In combination with Cobalt, Barium has a similar effect to that of Lead. Thus, it has seen some use as a substitute for	Ba	12.50%	0.1-0.5%
MORDRY® Calcium 4	Calcium carboxylates, by themselves, have minimal effectiveness as driers but are very useful when used in combination with active driers such as Cobalt and Manganese. Calcium driers help to improve hardness and gloss as well as to reduce skin-formation, silking, and blooming. They are also useful as pigment wetting/dispersing agents and loss-of-dry inhibitors. Calcium carboxylates are not recommended for coatings subjected to drying under adverse conditions	Ca	4%	2.5-10.0%
MORDRY® Calcium 4 O (Over-based)	See MORDRY® Calcium 4 for Calcium carboxylates characteristics	Ca	4%	2.5-10.0%
MORDRY® Calcium 4 WD	MORDRY® Calcium 4 WD is a water-dispersible Calcium salt of saturated branched mixture of acids. Excellent results can be achieved when using MORDRY® Calcium 4 WD together with other water-dispersible metal driers such as MORDRY® Cobalt 6 WD, MORDRY® Zirconium 12 WD and MORDRY® Manganese 6 WD. See MORDRY® Calcium 4 for Calcium carboxylates	Ca	4%	2.75%-8.1%
MORDRY® Calcium 10	See MORDRY® Calcium 4 for Calcium carboxylates characteristics	Ca	10%	1.0-4.0%
MORDRY® Cerium 10	Cerium carboxylates promote the polymerization and through-drying processes. They are particularly recommended for baking enamels and white and clear overprint varnishes, as they produce less discoloration than other active metals. Cerium driers are far less active than cobalt and manganese. At low temperatures (below 0°C) or at very high atmospheric humidity, cerium driers do though show higher efficacy than the other primary driers	Ce	10%	0.1-0.5%
MORDRY® Cobalt 6	Cobalt carboxylates are the most effective oxidative catalysts at ambient temperatures. Cobalt is a primary drier for coating systems. Cobalt soaps function as oxidation catalyst and are used at low levels. The use of excessive amounts of cobalt in coating systems can cause rapid skinning, wrinkling of the film as it dries, and reduced water resistance of the cured film	Co	6%	0.04-0.16%
MORDRY® Cobalt 6 P	MORDRY® Cobalt 6 P is a specially formulated cobalt carboxylate for unsaturated polyester applications. MORDRY® Cobalt 6 P is characterized by giving lighter color than the regular cobalt octoate. See MORDRY® Cobalt 6 for Cobalt carboxylates characteristics	Co	~6%	0.04-1.0%
MORDRY® Cobalt 6 T	MORDRY® Cobalt 6 T is a drier for coatings based on Cobalt salt of saturated branched C8 acids in toluene. See MORDRY® Cobalt 6 for Cobalt carboxylates characteristics	Co	~6%	0.04-0.16%
MORDRY® Cobalt 6 WD	MORDRY® Cobalt 6 WD is a water-dispersible Calcium salt of saturated branched mixture of acids. Excellent results can be achieved when using MORDRY® Cobalt 6 WD together with other water-dispersible metal driers such as MORDRY® Calcium 4 WD, MORDRY® Zirconium 12 WD and MORDRY® Manganese 6 WD. See MORDRY® Cobalt 6 for Cobalt carboxylates	Co	6%	0.02%-0.08%
MORDRY® Cobalt 10	See MORDRY® Cobalt 6 for Cobalt carboxylates characteristics	Co	10%	0.02-0.08%
MORDRY® Potassium 10	Potassium carboxylates work synergistically with Cobalt in unsaturated polyester thermo-set systems	K	10%	0.5-2.0%
MORDRY® Manganese 6 WD	MORDRY® Manganese 6 WD is a water-dispersible Manganese salt of saturated branched mixture of acids. Excellent results can be achieved when using MORDRY® Manganese 6 WD together with other waterdispersible metal driers such as MORDRY® Cobalt 6 WD, MORDRY® Zirconium 12 WD and MORDRY® Barium 10 WD	Mn	6%	0.02%-0.04%
MORDRY® Manganese 10	Manganese carboxylates improve the surface drying of a paint film and also possess some through-drying properties. They are frequently used as polymerization accelerators in baking finishes and low-temperature drying systems. They are used most often in combination with Lead and/or Cobalt driers and an auxiliary drier. In baking systems, Manganese soaps are most often used as a sole metal drier	Mn	10%	0.2-0.4%
MORDRY® Lead 24	Lead carboxylates promote thorough polymerization of the film, catalyzing the uniform drying of the surface and inside of it. In addition, they improve film's flexibility and its resistance to water and salt at the same time. Lead carboxylates are always combined with Cobalt and/or Manganese together with small amounts of Calcium drier	Pb	24%	0.12-0.9%
MORDRY® Lead 32	See MORDRY® Lead 24 for Lead carboxylates characteristics	Pb	32%	0.09-0.7%
MORDRY® Lead 36	See MORDRY® Lead 24 for Lead carboxylates characteristics	Pb	36%	0.08-0.6%



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Product name	Description	Symbol	Metal content	Dosage per resin solids
MORDRY® Zinc 16	Zinc carboxylates exhibit anti-oxidant properties and are used as additives to retard the thermal breakdown of lubricating oils and greases. Either by themselves or in conjunction with Calcium or Barium, they are very efficient at stabilizing PVC against in-process heat degradation. The main function of Zinc carboxylates is to improve film hardness and prevent wrinkling of thick films	Zn	16%	0.8-1.2%
MORDRY® Zirconium 12	Zirconium carboxylates improve the through-dry of auto-oxidative drying systems. They are used in combination with Cobalt and Calcium carboxylates. They are preferentially used as replacements for Lead. Zirconium will yield improved gloss and color when compared to Lead. Zirconium carboxylates are also utilized as polymerization catalysts	Zr	12%	0.8-3.0%
MORDRY® Zirconium 12 WD	MORDRY® Zirconium 12 WD is a water-dispersible Zirconium salt. MORDRY® Zirconium 12 WD will yield improved gloss and color and is usually added in combination with Cobalt or Manganese (especially the water-dispersible versions MORDRY® Cobalt 6 WD and MORDRY® Manganese 6 WD). See MORDRY® Zirconium 12 for Zirconium carboxylates characteristics	Zr	12%	0.8% and 3.0%
MORDRY® Zirconium 18	See MORDRY® Zirconium 12 for Zirconium carboxylates characteristics	Zr	18%	0.5 -2.0%
MORDRY® 210	MORDRY® 210 is a stabilized, ready-to-use blend of Cobalt and Zirconium dissolved in mineral spirit. This product can be used in applications where calcium is used as a wetting agent in the pigment dispersion stage. The pre-stabilized mixed drier can eliminate problems associated with coatings such as gelling or instability resulting in degradation of drying performance. MORDRY® 210 can	Mix	15%	0.6%-1.0%
MORDRY® 320	MORDRY® 320 is a stabilized, ready-to-use blend of Cobalt, Zirconium and Calcium suitable for use in a wide range of decorative paint systems. MORDRY® 320 is a single addition pre-blend drier system dissolved in mineral spirit. The pre-stabilized mixed drier can eliminate problems associated with coatings such as gelling or instability resulting in degradation of drying performance	Mix	1% (Co)	2.0%-8.0%
MORDRY® 380	MORDRY® 380 is a stabilized, ready-to-use Lead free blend of metals suitable for use in a wide range of decorative paint systems. MORDRY® 380 is characterized by giving lighter colors in clear varnishes and white based enamels	Mix	1.2% (Co)	1.5%-6.5%
MORDRY® 390	MORDRY® 390 is a stabilized, ready-to-use Lead-based blend of metals suitable for use in a wide range of decorative paint systems. MORDRY® 390 is characterized by giving lighter colors in clear varnishes and white based enamels	Mix	1% (Co)	2%-8%

