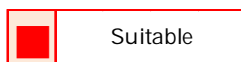




Product Selection Guide  
DISPERSION CONTROL ADDITIVES

# 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 refinsh) . 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					

(\*) Oil absorption (OA) value of a pigment is defined as the number of grams of linseed oil absorbed by 100 g of the pigment.  
 (\*\*) DBP (Dibutylphthalate )-value is defined as being the volume of Dibutylphthalate absorbed by 100 g of carbon black pigment.  
 (\*\*\*) BET-value is defined as being the surface area of a pigment per its weight; and is determined by N<sub>2</sub>-adsorption method according to Brunauer, Emmet and Teller.

