Dextrol™ and Strodex™ phosphate ester surfactants

Surfactant Selection Guide

Aqualon

ASHLAND

With good chemistry great things happen.™

Complete solutions for coatings

Dextrol™ and Strodex™ phosphate ester surfactants from Ashland Specialty Ingredients are leading technologies within our ever-expanding portfolio of high-performance additives for paints and coatings. These proprietary, specialty surfactants can be used in both alkyd and water-based paints, colorant systems, and as stabilizers in emulsion polymerization of latex resins.

Dextrol and Strodex surfactants have been developed for high performance in a variety of end-use applications by engineering specific chemistries under precisely controlled reaction conditions. These unique additives can improve stability and performance by replacing the wetting agents and supplementing the dispersants you are currently using. They will also improve compatibility with predispersed ingredients.

In waterborne coatings applications, Dextrol and Strodex surfactants are valued for their superior ability to improve dispersion of pigments. This enhances color development and hiding, as well as gloss in finished paint. The unique phosphate ester chemistry also can inhibit flash rusting over ferrous substrates, improve surface wetting and reduce water sensitivity in paints.

Key benefits:

- Improved gloss
- Enhanced color development
- More homogeneous and stable dispersion systems
- Improved wetting
- More stable viscosity on aging
- Stabilized TiO_2 and other reactive pigments
- Low water sensitivity in dried coatings
- Improved freeze-thaw stability and block resistance

Versatile surfactants for use in emulsion polymerization and specialty applications

Resin manufacturers rely on Dextrol OC-series surfactants as stabilizers in the polymerization of vinyl, acrylic and copolymer resin emulsions. These unique surfactants enable manufacturers to develop superior resins offering enhanced color acceptance and gloss, improved mechanical and storage stability, and better resistance to heat and light degradation. Dextrol and Strodex surfactants also can be used in a variety of other industries and applications including paper coatings, agricultural chemicals and printing inks. Contact the technical experts at Ashland Specialty Ingredients for specific recommendations and technical support.

Reliable service and support

As the global leader in rheology and performance-enhancing additives for paints and coatings, Ashland Specialty Ingredients has sales offices, production facilities, laboratories and applications specialists across North America, Europe and Asia. We are dedicated to supporting new product development, technical assistance and customer support. We utilize state-of-the-art analytical and testing resources and constantly assess market trends to develop the next generation of additives to help you improve the performance and value of your paint and coating products.

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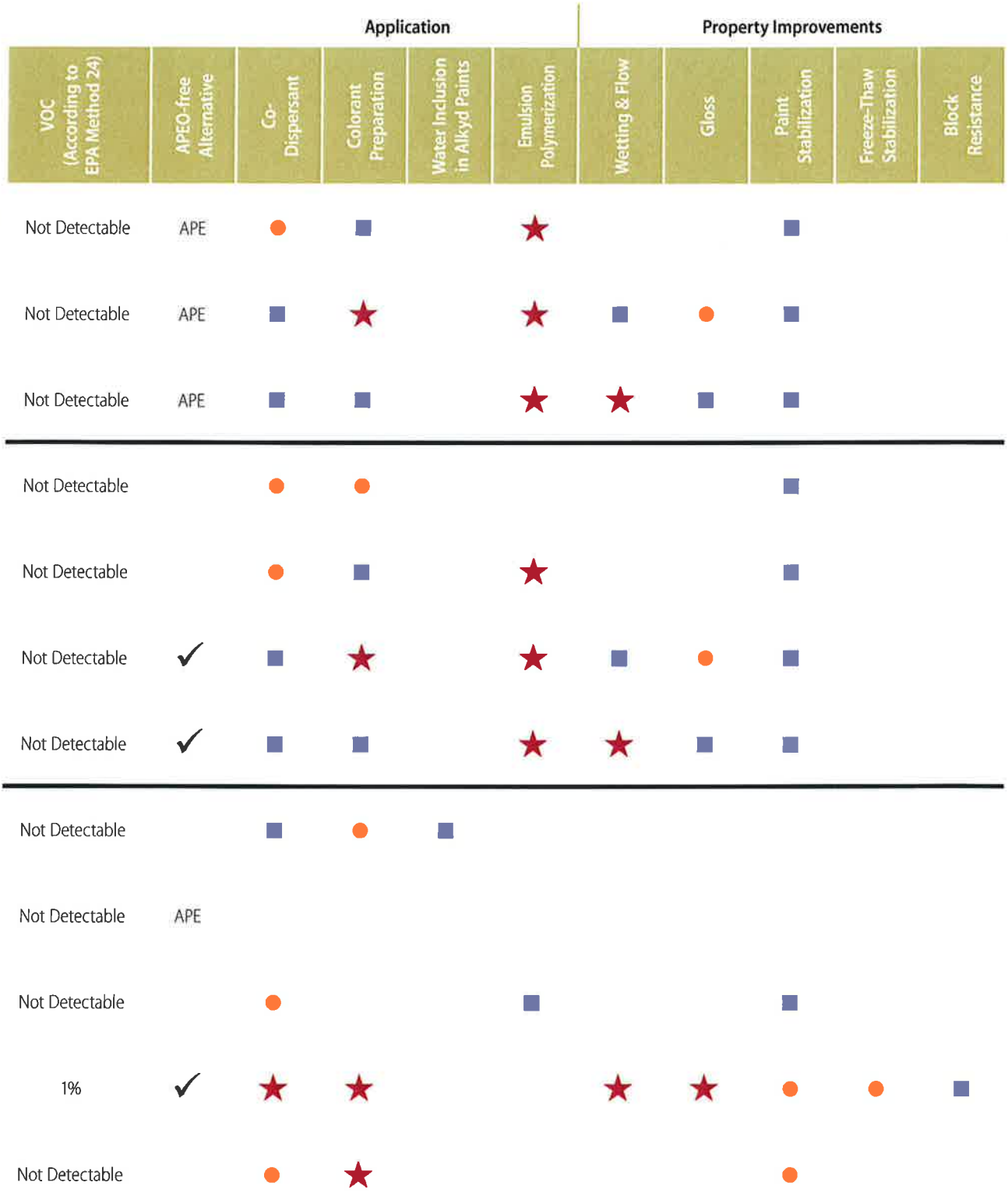
Phosphate esters - free acids

Product	Salt Form	Chemical Description/ Moles of EO	Typical Active Content [%]	Typical Viscosity [cPs at 25° C]	Surface Tension: 0.1 Active wt% in water; pH ~7[dynes/cm]	Relative Solubility in Water
Dextrol OC-20/22	H	Phosphate Ester of Nonylphenol Ethoxylate (10 moles)	97	5,600	35.3	Hydrophilic
Dextrol OC-15[1]	H	Phosphate Ester of Nonylphenol Alcohol Ethoxylate (6 moles)	97	3,600	30.3	
Dextrol OC-110	H	Phosphate Ester of Nonylphenol Alcohol Ethoxylate (3 moles)	97	36,000	33.4	Hydrophobic
Dextrol OC-93Z	H	Phosphate Ester of Tridecyl Alcohol Ethoxylate	99	3500		Hydrophilic
Dextrol OC-70	H	Phosphate Ester of Tridecyl Alcohol Ethoxylate (10 moles)	97	800	36.2	
Dextrol OC-60[1]	H	Phosphate Ester of Tridecyl Alcohol Ethoxylate (6 moles)	97	800	30.1	
Dextrol OC-40	H	Phosphate Ester of Tridecyl Alcohol Ethoxylate (3 moles)	97	800	26.5	Hydrophobic
Strodex FT-100	H	Phosphated Alcohol	99	4000	50	Hydrophilic
Strodex LH-55	H	Phosphate Ester of Nonylphenol Ethoxylate	80	10,000		
Strodex SE-100	H	Phoshate Coester of Aliphatic Ethoxylate Mixture	96	200	27.9	
Strodex P-100	H	Phosphate Coester of Alcohol and Aliphatic Ethoxylate	98	600	29.8	
Strodex MO-100	H	Phosphated Alcohol	98	1,300	43	Hydrophobic

★ Highly recommended ■ Recommended ● Can be used

[1] Most popular



Did you know?

The Ashland Specialty Ingredients family of performance additives for paint and coatings also includes Aquaflow™ non-ionic synthetic associative thickeners, Natrosol™ HEC, Natrosol Plus modified HEC, Culminal™ and Combizell™ methylcellulose derivatives, pHLEX™ neutralizing agents, and Advantage™ and Drewplus™ foam control agents.

Phosphate esters - neutralized salts

Product	Phosphate Acid Source	Salt Form	Chemical Description/ Moles of EO	Typical Active Content [%]	Typical Viscosity [cPs at 25° C]	Surface Tension: 0.1 Active wt% in Water; pH ~7[dynes/cm]	Relative Solubility in Water
Dextrol OC-7525	Dextrol OC-70	NH_4	10	25	600	36.2	Hydrophilic
Dextrol OC-78N	Dextrol OC-70	Na	10	89	15,000	36.2	
Dextrol OC-6025	Dextrol OC-60	NH_4	6	25	600	26.5	
Dextrol OC-180[1]	Dextrol OC-60	K	6	45	600	30.1	
Dextrol OC-50[1]	Dextrol OC-15	Na	6	90	6,000	30.3	
Dextrol OC-4025	Dextrol OC-40	NH_4	3	25	600	26.5	
Dextrol OC-45N	Dextrol OC-40	Na	3	82	8,600	26.5	Hydrophobic
Strodex FT-50K	Strodex FT-100	K	Phosphated Alcohol	50	< 100	50	Hydrophilic
Strodex SEK-50D	Strodex SE-100	K	Phoshate Coester Aliphatic Ethoxylate Mixture	50	100	27.9	
Strodex TH-100		K	Proprietary Blend	81	300		
Strodex TH-4427		K	Proprietary Blend	97	200		
Strodex FT-428		K	Proprietary Blend	92	800		
Strodex PLF-100		Na	Phosphate Coester	82	1500		
Strodex LFK-70[1]		K	Phosphate Coester	70	400	35.8	
Strodex PSK-28		K		55	50	28.4	
Strodex NB-20	Proprietary Blend	Na		99	500		
Strodex PK-90[1]	Strodex P-100	K	Phosphate Coester Alcohol and Aliphatic Ethoxylate	90	7,000	29.8	
Strodex PK-95G	Strodex P-100	K	Phosphate Coester Alcohol and Aliphatic Ethoxylate	80	1700	29.8	
Strodex PK-80N	Strodex P-100	K	Phosphate Coester Alcohol and Aliphatic Ethoxylate	68	1000	29.8	
Strodex PK-OVOC[1]	Strodex P-100	K	Phosphate Coester Alcohol and Aliphatic Ethoxylate	35	280	30.5	
Strodex MOK-70	Strodex MO-100	K	Phosphated Alcohol	70	Partial Gel >100K	36.9	
Strodex KM-0VOC	Strodex MO-100	K	Phosphated Alcohol	40	< 100	43	
Strodex EHK-70		K	Phosphated Alcohol	70	Partial Gel >100K	43	Hydrophobic

★ Highly recommended ■ Recommended ● Can be used

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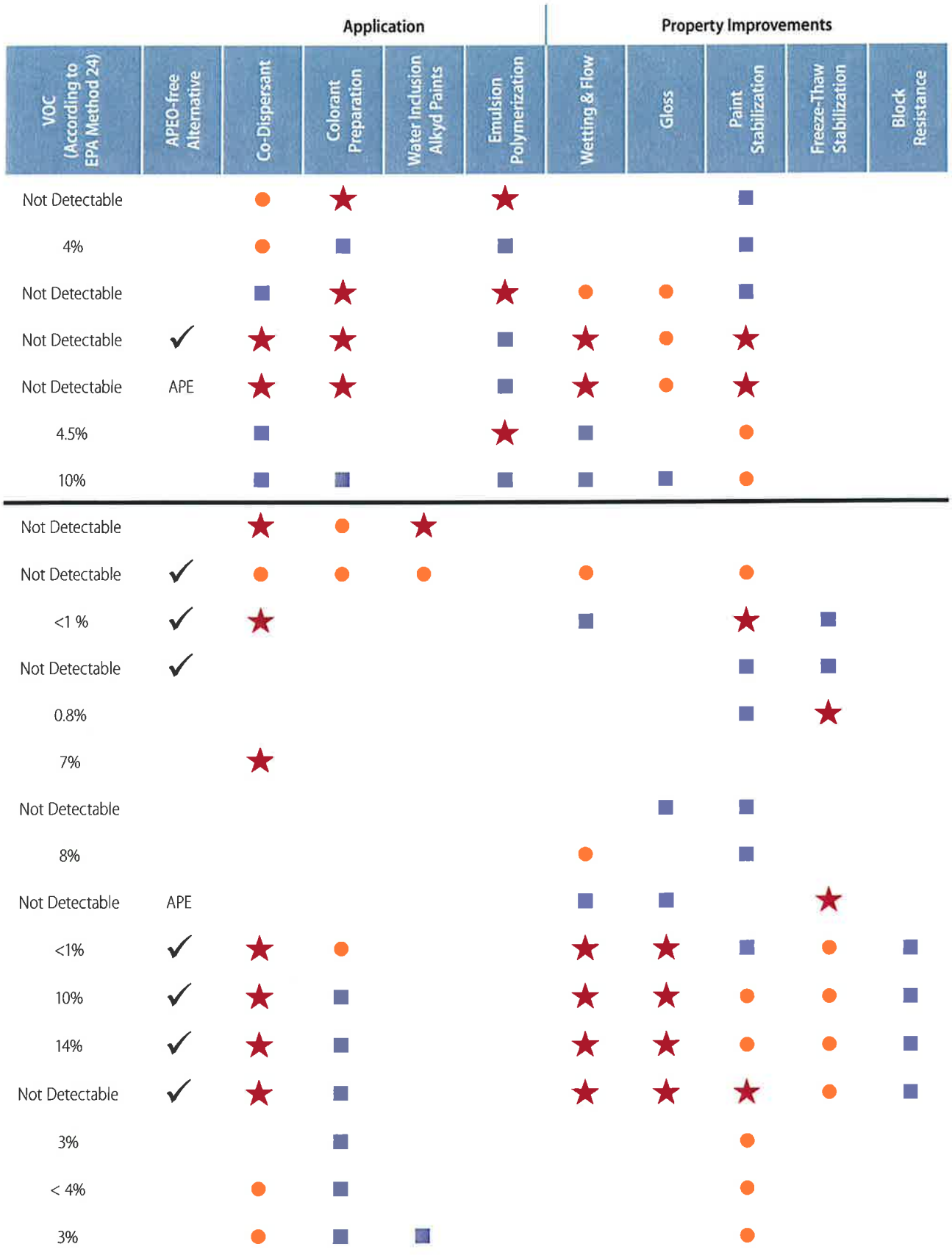

Contact us today.

For more information, contact your Ashland Specialty Ingredients technical sales representative or visit us online at ashland.com.

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Ashland Specialty Ingredients

Ashland Specialty Ingredients is a leading producer of cellulose ethers worldwide. It provides specialty additives and functional ingredients that manage the physical properties of aqueous and non-aqueous systems including rheology control, water retention, bonding strength, film formation, conditioning, deposition and stabilization. Many of its products - used in paint and coatings, construction, food, personal care, pharmaceuticals, oil and gas field production and specialty industries - are derived from renewable and natural raw materials.