

Additives for Coatings, Inks, and Adhesives

SOLUTIONS THAT ADD REAL VALUE TO YOUR SYSTEMS





WE TAKE
A HOLISTIC
APPROACH
TO IMPROVING
OUR CLIENTS'
COMPETITIVE
ADVANTAGE...

WE OFFER
SOLUTIONS,
NOT JUST
PRODUCTS.

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About Us

COMMITTED TO PROVIDING UNMATCHED PERFORMANCE

Evonik Industries seeks at all times to maintain its reputation as a leading supplier of exceptional specialty additives throughout the world. We do this through continual investment in product development and pace setting technology, as well as by anticipating the needs of our customers and offering innovative solutions – sometimes even in advance of our customers’ anticipated requirements.

Over 45 years ago, we recognized the inevitable shift from solvent to water-based systems and helped guide formulators through the challenges of making the transition. From a small number of SURFYNOL® surfactant products, we have applied our surface science knowledge to help create what is today recognized as an exceptional product portfolio. We continually strive to be the global supplier of choice of specialty additives, supplying, within a broad range of applications and markets, customers who value high performance solutions.

A WINNING TEAM

Additives may be able to help you solve formulating challenges – but it’s the people behind the products that really make a difference. For decades, our chemists have been studying the unique challenges faced by the formulators of water-based systems. With their support, our goal is to help you achieve your goal of creating successful products. From product development to applications testing to technical service, we can help you put it all together by teaming the best products with an unparalleled applications development team. From ideas to finished products, our team can help you develop products, solve problems and grow your business.



**OFFERING YOU SOLUTIONS,
NOT JUST PRODUCTS.**



Evonik's families of SURFYNOL[®], DYNOL[™], AIRASE[®], ZETASPERSE[®] and CARBOWET[®] additives are widely used in countless industries, including coatings, inks, adhesives, metalworking and construction. Our continued commitment to developing new and beneficial surfactant technology promises to be an answer to ongoing challenges facing formulators. We are constantly working to provide unique products and performance solutions for a broadrange of applications.

DYNOL[™] SUPERWETTERS

For your most demanding applications – we think these superwetting surfactants are second to none.

SURFYNOL[®] MULTIFUNCTIONAL ADDITIVES

A top performing range of multifunctional surfactants and defoamers. Our broad product line includes low foam dynamic wetting agents, unique molecular defoamers, as well as specialty surfactants designed for specific end-use applications.

AIRASE[®] DEFOAMERS AND DEAERATORS

A complete line of defoamers and deaerators for waterborne applications, each formulated to provide the optimum of defoaming and compatibility in a given system. The product line includes our unique defoamers and deaerators as well as our innovative Structured Siloxane Defoamer Line (SSDL defoamers), a line of defoamers designed to provide predictable performance relative to one another.

ZETASPERSE[®] DISPERSANTS

A dedicated line of products that address unique challenges of dispersing pigments and other particles efficiently and effectively.

CARBOWET[®] SURFACTANTS

Perfect for applications where you need wetting and surface tension reduction with varying degrees of emulsification and stabilization.

Product Overview

Some products are not available in all regions. Please check with your local office.

Defoamers and deaerators

Oil

AIRASE® 4500
AIRASE® 4655
AIRASE® 4750V
AIRASE® 4800
SURFYNOL® DF-37
SURFYNOL® DF-220

Siloxane

AIRASE® 5100
AIRASE® 5200
AIRASE® 5300
AIRASE® 5355
AIRASE® 5400
AIRASE® 5500
AIRASE® 5600
AIRASE® 5655
AIRASE® 5700
AIRASE® 8070
SURFYNOL® DF-58
SURFYNOL® DF-62
SURFYNOL® DF-66
SURFYNOL® DF-178
SURFYNOL® DF-695

Molecular

SURFYNOL® AD01
SURFYNOL® 107L
SURFYNOL® 104*
SURFYNOL® 500S
SURFYNOL® DF-110*
SURFYNOL® MD-20
SURFYNOL® MD-610S
SURFYNOL® PC

Surfactants

Superwetters

DYNOL™ 360
DYNOL™ 604
DYNOL™ 607
DYNOL™ 800
DYNOL™ 810
DYNOL™ 960
DYNOL™ 980

Multifunctional

DYNOL™ 360
SURFYNOL® AD01
SURFYNOL® 107L
SURFYNOL® 104*
SURFYNOL® 420
SURFYNOL® 440
SURFYNOL® 465
SURFYNOL® 485*
SURFYNOL® 2502

Specialty/Formulated

CARBOWET® GA-100
CARBOWET® GA-200
CARBOWET® GA-210
CARBOWET® GA-211
CARBOWET® GA-221
CARBOWET® LSF
SURFYNOL® 355
SURFYNOL® 500S
SURFYNOL® 61
SURFYNOL® 82
SURFYNOL® FS-85
SURFYNOL® OP-340
SURFYNOL® PSA336
SURFYNOL® SE
SURFYNOL® SE-F

Traditional/Stabilizing

CARBOWET® 76
CARBOWET® 103
CARBOWET® 106
CARBOWET® 109
CARBOWET® 125
CARBOWET® 138
CARBOWET® 144
ZETASPERSE® 170
ZETASPERSE® 179
ZETASPERSE® 182

Dispersants

Resin-free systems

ZETASPERSE® 1200
ZETASPERSE® 2300
ZETASPERSE® 2500
ZETASPERSE® 3100
ZETASPERSE® 3400
ZETASPERSE® 3600
ZETASPERSE® 3700
ZETASPERSE® 3800

Resin-containing systems

ZETASPERSE® 170
ZETASPERSE® 179
ZETASPERSE® 182
ZETASPERSE® 2500
ZETASPERSE® 3600

* This product is available in different forms.



**WE'RE DEDICATED TO ANTICIPATING
CUSTOMER REQUIREMENTS AND TO
HELPING OUR CUSTOMERS DEVELOP
THEIR BUSINESS . . .**

ADDITIVES FOR COATINGS AND PAINTS

+++ Top recommendations
+ Secondary options

		Architectural	Industrial & maintenance	Automotive	Specialty paper	Plastic	Wood	Powder	Pigment dispersion (base)	Pigment dispersion (colorant)
DEFOAMING	AIRASE® 5100	++	+						++	++
	AIRASE® 5200	++	+						++	++
	AIRASE® 5300	++	++			+	+		+	+
	AIRASE® 5355				++				++	++
	AIRASE® 4500	++	++	+					++	+
	AIRASE® 5400	++	+			+	+		+	+
	SURFYNOL® DF-220	++		+	+					
	SURFYNOL® DF-58	++	++			+	++		++	++
	AIRASE® 8070	++	++	+		+	++		++	++
	AIRASE® 5500	+	++	+			++			+
	SURFYNOL® DF-62	+				++	++			
	SURFYNOL® DF-66	+				++	++			
	AIRASE® 5600	+	++	+		+	++			
	SURFYNOL® DF-178		+	+		++	++			
AIRASE® 5700		+	+		++	++				
MOLECULAR DEFOAMERS	SURFYNOL® DF-110*	++	++	++	+	++			++	++
	SURFYNOL® AD01	++	++	++	++	+	+		++	++
	SURFYNOL® 107L	++	++	++	++	+	+		++	++
	SURFYNOL® MD-20	++	+	++	++	++	++		++	++
	SURFYNOL® 104*	++	++	++	+	++	++	++	+	+
	SURFYNOL® 420	++	++	++	+	++	++		+	+
	SURFYNOL® PC				++					
	SURFYNOL® 500S							++		
SUPERWETTERS	DYNOL™ 960	+	++	+		++	++			
	DYNOL™ 980	+	++	+		+	+			
	DYNOL™ 360	++	++	++	++	++	++		++	++
	DYNOL™ 800		++	++	+	++	++			
	DYNOL™ 810		+	+	+	+	+			
	DYNOL™ 607		++	++	++	+	+			
	SURFYNOL® 420	++	++	++		++	++		+	+
	SURFYNOL® SE-F			+	++		++			
	SURFYNOL® PSA336	+			++	+				
	SURFYNOL® 440	+	++	+	++	+	++			
	SURFYNOL® 2502	+	+	++	++	+	+			
SURFYNOL® 485*		++								
GRIND AIDS	CARBOWET® 106	+								
	CARBOWET® 109	+								
	CARBOWET® GA-100	++							++	+
	CARBOWET® GA-200	++	++	++					++	++
	CARBOWET® GA-210	++		++					++	++
	CARBOWET® GA-211	+		++					++	++
	CARBOWET® GA-221			++					+	++
	ZETASPERSE® 170	+	+						+	++
ZETASPERSE® 179	++	+						++	++	
ZETASPERSE® 182	+	+						++	++	
ZETASPERSE® XXXX**	++	++	++	++	++	++		++	++	

*This product is available in different forms.

**For specific pigment dispersant recommendations, use the FAZT tool at FAZT.com or contact Evonik Corporation.

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***The product carries broad food contact compliances.

ADDITIVES FOR INKS AND GRAPHIC ARTS

+++ Top recommendations
+ Secondary options

		Inks	Fountain Solutions	Overprint Varnishes	Pigment Dispersions (resinated)	Pigment Dispersions (resin-free)	
DEFOAMING		AIRASE® 5100		+++	+++		
		AIRASE® 5200		+++	+++		
		AIRASE® 5300	+	+++	+++	+	
		AIRASE® 5355***	+++		+++	+++	
		SURFYNOL® DF-695	+++				
		AIRASE® 4500	+++		+++	+	
		AIRASE® 5400	+++		+++	+	
		AIRASE® 4655***	+		+	+	
		SURFYNOL® DF-58	+		+++	+	
		AIRASE® 8070	+		+	+	
		AIRASE® 5500	+++		+	+++	
		SURFYNOL® DF-62	+++				
		SURFYNOL® DF-66	+++		+++		
		AIRASE® 5600	+++		+	+	
		AIRASE® 5655***	+++		+	+	
	SURFYNOL® DF-178				+		
	AIRASE® 5700	+		+			
WETTING	MOLECULAR DEFOAMERS	SURFYNOL® DF-110*	+	+++		+++	
		SURFYNOL® AD01	+++		+++	+++	
		SURFYNOL® 107L	+++			+++	+++
		SURFYNOL® MD-20	+	+		+++	+++
		SURFYNOL® 104*	+++	+	+	+	+
	SUPERWETTERS	DYNOL™ 960	+++		+		
		DYNOL™ 980	+		+++		
		DYNOL™ 360		+++			
		DYNOL™ 800	+		+		
		DYNOL™ 810	+++		+++		
	DYNOL™ 607		+++				
	SURFYNOL® 355***	+		+++			
	SURFYNOL® 420	+++	+++		+++	+++	
	SURFYNOL® SE-F	+++					
	SURFYNOL® OP-340			+++			
	SURFYNOL® 440	+++	+++				
	SURFYNOL® 2502	+++	+++	+++			
	SURFYNOL® 465		+++				
	SURFYNOL® FS-85		+++				
STABILIZING	GRIND AIDS	CARBOWET® GA-100			+++	+++	
		CARBOWET® GA-200			+++	+++	
		CARBOWET® GA-210			+++	+++	
		CARBOWET® GA-211			+++	+++	
		CARBOWET® GA-221			+++	+++	
		ZETASPERSE® 170				+++	+
		ZETASPERSE® 179				+++	+
		ZETASPERSE® 182	+++			+++	
	ZETASPERSE® XXXX**				+++	+++	

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ADDITIVES FOR ADHESIVES AND LATEX DIPPING

+++ Top recommendations
+ Secondary options

		Adhesives: film and PSA	Adhesives: engineered lumber	Lamination adhesives	Latex dipping	
DEFOAMING		SURFYNOL® DF-695		+		
		AIRASE® 4500	+++	+		
		AIRASE® 4655	+++		+	
		SURFYNOL® DF-220	+		+	
		SURFYNOL® DF-58	+			
		AIRASE® 8070			+	
		SURFYNOL® DF-37	+		+++	
		AIRASE® 5500			+	
		SURFYNOL® DF-66		+	+++	
		AIRASE® 5600	+		+	
		SURFYNOL® DF-178		+++		
		AIRASE® 5700			+	
MOLECULAR DEFOAMERS		SURFYNOL® DF-110*		+		
		SURFYNOL® AD01	+	+	+++	
		SURFYNOL® 107L	+	+	+++	
		SURFYNOL® MD-20	+	+	+	
		SURFYNOL® 104*	+	+++	+	
WETTING	SUPERWETTERS	DYNOL™ 960	+			
		DYNOL™ 980	+			
		DYNOL™ 360	+	+	+	
		DYNOL™ 800	+++		+	
		DYNOL™ 810	+		+	
		SURFYNOL® 355	+++	+	+++	
		SURFYNOL® 420	+	+		
		SURFYNOL® SE-F	+	+	+	
		SURFYNOL® PSA336	+++	+	+++	
		SURFYNOL® 440	+++	+++		
		SURFYNOL® 2502	+	+		
		SURFYNOL® 465			+++	
		SURFYNOL® 485*			+++	
	STABILIZING	GRIND AIDS	CARBOWET® 109	+	+	+
			CARBOWET® GA-100	+		+
CARBOWET® GA-200			+	+	+	
CARBOWET® GA-211					+++	
CARBOWET® LSF					+++	
ZETASPERSE® 170			+			+
ZETASPERSE® XXXX**	+			+		

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Complete product offering

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SURFYNOL® MULTIFUNCTIONAL ADDITIVES

SURFYNOL® 107L

A nonionic wetting agent, molecular defoamer, and coalescing surfactant. SURFYNOL® 107L surfactant is based on a patented surface active agent that provides strong molecular defoaming and efficient dynamic wetting benefits in all waterborne applications. SURFYNOL® 107L surfactant also provides coalescing benefits in waterborne coatings. No added solvents or APEs.

SURFYNOL® 2502

An alkoxyated low-foam wetting agent (100% active liquid). SURFYNOL® 2502 surfactant is based on patented alkoxyated acetylenic diol surface active chemistry. Provides ideal balance of dynamic surface tension reduction and system compatibility with very low foam in waterborne coatings, inks, and adhesives systems. FDA clearances, no added solvents or APEs.

SURFYNOL® 355

An excellent dynamic wetting agent designed to provide wetting of hydrophobic substrates without generating excess foam; particularly useful in waterbased inks, overprint varnishes, adhesives, pigment dispersions, and coatings applications. It does not contain added mineral oils, hazardous air pollutants (HAPs), alkyl phenol ethoxylates (APEs) or acetylenic diols. The product has multiple regional food contact compliances.

SURFYNOL® 420

SURFYNOL® 420 surfactant performs as a dynamic wetting agent and molecular defoamer in a wide variety of applications, including waterborne coatings, inks, adhesives, agricultural chemicals, and numerous industrial specialty applications. It is a 100% active, easy-to-handle liquid that contains no added alkylphenol ethoxylates (APEs) or hazardous air pollutants (HAPs). SURFYNOL® 420 surfactant complies with several regulations needed for applications requiring food contact compliances in the U.S., Europe and Asia, as well as EPA clearances needed for use in agricultural chemical applications.

SURFYNOL® 440

An ethoxylated low-foam wetting agent (100% active liquid). SURFYNOL® 440 surfactant provides low foam dynamic and equilibrium surface tension reduction with improved dispersibility and ease of incorporation in waterborne coatings, inks, and adhesives systems. FDA and EPA clearances, no added solvents or APEs.



SURFYNOL® 465

An ethoxylated low-foam wetting agent (100% active liquid). SURFYNOL® 465 surfactant is an ethoxylated acetylenic diol that provides low foam surface tension reduction with improved solubility and compatibility in waterborne coatings, inks, and adhesives systems. FDA and EPA clearances, no added solvents or APEs.

SURFYNOL® 485

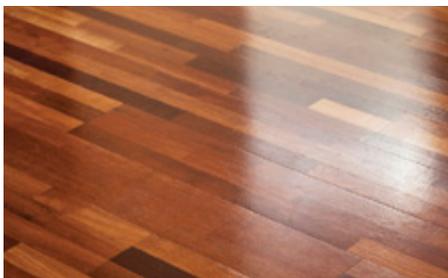
An ethoxylated low-foam wetting agent (100% active liquid/semi-solid). Provides low-foam surface tension reduction with slight emulsification properties, improved solubility and compatibility in waterborne coatings, inks, and adhesives systems. FDA and EPA clearances, no added solvents or APEs.

SURFYNOL® 485W

An ethoxylated low-foam wetting agent (75% active solution in water). Provides low-foam surface tension reduction with slight emulsification properties and improved solubility and compatibility in waterborne coatings, inks, and adhesives systems. FDA and EPA clearances, no added solvents or APEs.

SURFYNOL® 500S

A powdered nonionic wetting agent and molecular defoamer. SURFYNOL® 500S surfactant is a powdered preparation that provides rapid wetting of solid particles, fillers, pigments, and fibers; fast mixing and enhanced workability of cementitious systems. FDA clearances, no added APEs.



SURFYNOL® 61

A volatile wetting agent (100% active liquid). SURFYNOL® 61 surfactant is a multifunctional surface active agent based on acetylenic chemistry that provides substrate wetting in systems where surfactant residues or contamination are undesirable, such as silicon wafer or glass cleaning. The properties of SURFYNOL® 61 allow it to completely evaporate under normal use conditions in variety of aqueous systems. No added solvents or APEs.

SURFYNOL® 82

A nonionic surfactant (100% active solid) SURFYNOL® 82 offers excellent non-foaming wetting in aqueous systems and is strongly synergistic with other surface active agents.

It can be volatilized without degrading when heated to its boiling point of 221 Celsius. EPA and FDA clearances, no added APEs.

SURFYNOL® DF-110C

A nonionic, organic molecular defoamer. SURFYNOL® DF-110C defoamer is an acetylenic diol-based product that provides defoaming and de-airetraining in aqueous systems without the side effects typical of many traditional foam control agents. Benefits include: microfoam elimination, long-lasting foam control, defect-free foam control, and good dynamic wetting. No added APEs.

SURFYNOL® DF-110D

A nonionic, organic molecular defoamer. SURFYNOL® DF-110D defoamer is an acetylenic diol-based product that provides defoaming and de-airetraining in aqueous systems without the side effects typical of many traditional foam control agents. Provides microfoam elimination, long-lasting foam control, defect-free foam control, and good dynamic wetting. No added APEs.

SURFYNOL® DF-110L

A nonionic, organic molecular defoamer. SURFYNOL® DF-110L defoamer is an acetylenic diol-based product that provides defoaming and de-airetraining in aqueous systems without the side effects typical of many traditional foam control agents. Benefits include: microfoam elimination, long-lasting foam control, defect-free foam control, and good dynamic wetting. No added APEs.

SURFYNOL® DF-178

A formulated siloxane-based defoamer and de-aerator (100% active liquid). SURFYNOL® DF-178 defoamer was developed specifically for applications in waterborne coatings and graphic arts that demand both powerful defoaming and defect-free surfaces. Provides strong defoaming and microfoam control and is particularly effective in spray applications. No added APEs.

SURFYNOL® DF-37

A nonionic, organic defoamer (100% active liquid). SURFYNOL® DF-37 defoamer is a proprietary acetylenic-based additive that provides foam control and surface wetting in water-based formulations. FDA compliance. No added APEs.

SURFYNOL® DF-58

A siloxane-based defoamer (100% active liquid). SURFYNOL® DF-58 defoamer is a proprietary formulation that provides strong foam control and de-aeration performance in water-based formulations. No added APEs.

SURFYNOL® DF-62

An ether-modified polysiloxane defoamer (100% active liquid). SURFYNOL® DF-62 defoamer is a proprietary formulation that provides excellent balance of initial foam knockdown and sustained antifoaming over time in water-based formulations. No added APEs.

SURFYNOL® DF-66

A modified polysiloxane based defoamer. SURFYNOL® DF-66 defoamer is a proprietary formulation that provides excellent balance of initial foam knockdown and sustained antifoaming over time in water-based formulations. FDA compliances, no added APEs.

SURFYNOL® DF-695

A silicone emulsion defoamer. SURFYNOL® DF-695 defoamer is a proprietary emulsified silicone additive. Provides initial and sustained defoaming performance in water-based formulations. FDA compliances, no added APEs.

SURFYNOL® DF-220

An organic defoamer (100% active liquid). SURFYNOL® DF-220 defoamer is a proprietary, non-silicone additive that provides rapid and sustained defoaming in water-based printing inks, coatings and adhesives systems. SURFYNOL® DF-220 defoamer is ideally suited for architectural and medium- to high-PVC systems. No added APEs.

SURFYNOL® FS-85

An anionic/nonionic wetting agent. SURFYNOL® FS-85 surfactant is a proprietary additive designed for use in lithographic fountain solutions. Provides important wetting and emulsification properties, allowing the elimination of solvents and other undesirable additives from fountain solution formulations. No added APEs. SURFYNOL® MD-20 A nonionic, organic defoaming/de-aerating wetting agent (100% active liquid). SURFYNOL® MD-20 molecular defoamer is based on proprietary modified acetylenic diol chemistry. Provides foam control and reduces microfoam without any of the incompatibilities or other issues associated with silicone or mineral oil defoamers. No added APEs.

SURFYNOL® MD-610S

A highly effective powder defoamer designed to eliminate air entrapment in cementitious based products for the construction industry. The unique chemistry of SURFYNOL® MD-610S defoamer combines the benefits of fast-acting defoaming with long-lasting deaeration at a molecular level. SURFYNOL® MD-610S defoamer enables the fast escape of entrapped air while incorporating water and during mixing. The resulting cementitious compositions exhibit enhanced flow, excellent self-leveling, reduced air content and a smooth and defect-free hardened surface. SURFYNOL® MD-610S defoamer is universally applicable for use in both neutral and alkaline systems.

SURFYNOL® OP-340

An anionic/nonionic wetting agent. SURFYNOL® OP-340 wetting agent is a proprietary additive designed specifically for use in waterborne overprint varnish systems. Helps eliminate surface tension related issues like poor wetting, retraction, surface defects, or orange peel over both wet and dry lithographic inks. FDA compliances. No added APEs.

A molecular defoamer. SURFYNOL® PC defoamer is a proprietary formulation designed specifically to provide foam control and pigment shock reduction in paper coating formulations. Provides long-lasting defoamer activity. Stable through continued recycling of the formulation. No added APEs.

SURFYNOL® PSA336

A formulated wetting agent. SURFYNOL® PSA336 surfactant is based on a proprietary combination of surface active chemistries. Provides very low dynamic surface tension and substrate wetting while minimizing foam creation in water-based pressure sensitive and laminating adhesives. No added solvents or APEs.

SURFYNOL® SE

A self-emulsifiable wetting agent and defoamer. SURFYNOL® SE surfactant is a self-emulsifiable product based on acetylenic diol chemistry. Provides similar performance to SURFYNOL® 104, but with improved handling and incorporation in a wide variety of aqueous systems. No added APEs.

SURFYNOL® SE-F

A self-emulsifiable wetting agent and defoamer. SURFYNOL® SE-F surfactant is a self-emulsifiable product based on acetylenic diol chemistry. Provides similar performance to SURFYNOL® SE, but with greater FDA approvals in a wide variety of aqueous systems. FDA compliance, no added APEs.

SURFYNOL® 104

A nonionic wetting agent and molecular defoamer (100% active waxy solid). SURFYNOL® 104 surfactant is an acetylenic diol based surface active agent that provides dynamic wetting and defoaming in waterborne coatings, inks, and adhesives systems. SURFYNOL® 104 is available in a number of solvent cuts as well as powdered forms. FDA and EPA compliances, no added solvents or APEs.

**We take a responsible lead
in offering additives that
perform to the highest
environmental standards . . .**

DYNOL™ SUPERWETTERS

DYNOL™ 360

A high-performance nonionic superwetting and coalescing surfactant (100% active liquid). DYNOL™ 360 surfactant is based on patented technology that provides extremely low dynamic and equilibrium surface tension reduction with low foam and film formation/coalescing benefits. Helps enable low-VOC coatings customers to meet environmental regulations in a variety of demanding waterborne applications. With no added solvents or APEs, this organic chemistry makes it a performance alternative to silicone and fluorosurfactants.

DYNOL™ 604

A high-performance, ethoxylated non-ionic superwetter (100% active liquid). DYNOL™ 604 surfactant is based on patented ethoxylated, acetylenic diol surface active chemistry. Provides extremely low dynamic and equilibrium surface tension with low foam in a variety of demanding waterborne applications. With no added solvents or APEs, this organic chemistry makes it a performance alternative to silicone and fluorosurfactants.

DYNOL™ 607

A high-performance, ethoxylated nonionic superwetter (100% active liquid). DYNOL™ 607 surfactant is based on patented ethoxylated, acetylenic diol surface active chemistry. Provides extremely low dynamic and equilibrium surface tension with low to moderate foam and improved solubility in a variety of demanding waterborne applications. With no added solvents or APEs, this organic chemistry makes it a performance alternative to silicone and fluorosurfactants.

DYNOL™ 800

A high-performance, nonionic superwetter (100% active liquid). DYNOL™ 800 surfactant provides a superior balance of properties compared to traditional fluorosurfactants and silicone surfactants, with exceptional performance in wood, plastic, and automotive coatings as well as a wide variety of other water-based coating applications. Based on Gemini technology, DYNOL™ 800 surfactant is easy to formulate and has the ability to reduce both equilibrium and dynamic surface tension to levels not achieved with other surfactants. This excellent balance of properties makes DYNOL™ 800 surfactant an excellent alternative for difficult-to-wet substrates requiring good flow and leveling under diverse application conditions.

DYNOL™ 810

A high-performance, nonionic superwetter (100% active liquid). DYNOL™ 810 surfactant provides a superior balance of properties compared to traditional fluorosurfactants and silicone surfactants, with exceptional performance in inks and a wide variety of other water-based coating applications. Based on Gemini technology, DYNOL™ 810 surfactant is easy to formulate and has the ability to reduce both equilibrium and dynamic surface tension to levels not achieved with other surfactants. This excellent balance of properties makes DYNOL™ 810 surfactant an excellent alternative for difficult-to-wet substrates requiring good flow and leveling under diverse application conditions.

DYNOL™ 960

DYNOL™ 960 superwetting surfactant is an optimized siloxane-based surfactant providing excellent equilibrium and dynamic surface tension reduction in a wide range of aqueous formulations. Designed to provide superwetting on difficult-to-wet substrates, it offers superior substrate wetting with extremely low foam. The characteristics of DYNOL™ 960 surfactant enable exceptional performance in waterborne plastic coatings and printing inks. DYNOL™ 960 surfactant can also provide good flow and leveling under diverse application conditions. Contains no added solvents, APEs or HAPs.

DYNOL™ 980

DYNOL™ 980 superwetting surfactant is an optimized siloxane-based surfactant providing good equilibrium and dynamic surface tension reduction in a wide range of aqueous formulations. Designed to provide superwetting on difficult-to-wet substrates, it offers superior substrate wetting with low foam and excellent compatibility. The characteristics of DYNOL™ 980 surfactant enable exceptional performance in waterborne wood coatings and overprint varnishes. DYNOL™ 980 surfactant can also provide good flow and leveling under diverse application conditions. Contains no added solvents, APEs or HAPs.

AIRASE® DEFOAMERS AND DEAERATORS

AIRASE® 4500

A proprietary oil defoamer designed to eliminate foam, pinholes and entrapped air in water-based inks, adhesives and coatings without generating surface defects. It contains no added mineral oils, HAPs, or APEs and has several FDA compliances.

AIRASE® 4655

A relatively compatible organic oil-based defoamer designed to control and eliminate foam in a broad range of waterbased systems, with particular advantages in adhesives end-use applications as well as in inks, pigment grinds, overprint varnishes and coatings systems. It is easy to incorporate and provides excellent compatibility with high shear stability. It does not contain added mineral oils, hazardous air pollutants (HAPs), alkyl phenol ethoxylates (APEs) or acetylenic diols. The product has multiple regional food contact compliances.

AIRASE® 4750V

A proprietary vegetable oil based defoamer designed to control foam, bubbles, and entrapped air without generating surface defects. It does not contain added mineral oils, hazardous air pollutants (HAPs), or alkyl phenol ethoxylates (APEs). This defoamer combines good efficiency with excellent film compatibility and sustained defoaming performance, suitable for a wide range of waterborne applications.

AIRASE® 4800

100% active, mineral oil based defoamer for a variety of water-based formulations. It does not contain added hazardous air pollutants (HAPs), or alkyl phenol ethoxylates (APEs). This defoamer combines good film compatibility with sustained, long term defoaming performance.

AIRASE® 5100

The AIRASE® Structured Siloxane Defoamer Line (SSDL defoamers) consists of products that span the application space from strong defoaming to high compatibility. AIRASE® 5100 defoamer is the strongest defoamer of the SSDL defoamer line. Designed for applications where strong defoaming is required and the formulations are not sensitive to cratering.

AIRASE® 5200

The AIRASE® Structured Siloxane Defoamer Line (SSDL defoamers) consists of products that span the application space from strong defoaming to high compatibility. AIRASE® 5200 defoamer, a product in the SSDL defoamer line, is designed for applications where strong defoaming is required and the formulations are not particularly sensitive to cratering. Provides excellent long-term, persistent defoaming in formulations. Better film compatibility than AIRASE® 5100 defoamer.

AIRASE® 5300

The AIRASE® Structured Siloxane Defoamer Line (SSDL defoamers) consists of products that span the application space from strong defoaming to high compatibility. AIRASE® 5300 defoamer, a product in the SSDL defoamer line, is designed for applications where strong defoaming is required with good long-term persistency, especially in high shear applications.

AIRASE® 5355

A strong siloxane based defoamer designed to control and quickly eliminate foam without generating defects in waterbased pigment grinds, inks, overprint varnishes, and coatings. It can be incorporated into the grind or letdown, depending on the formulation requirement. It does not contain added mineral oils, hazardous air pollutants (HAPs), alkyl phenol ethoxylates (APEs) or acetylenic diols. The product has multiple regional food contact compliances.

AIRASE® 5400

The AIRASE® Structured Siloxane Defoamer Line (SSDL defoamers) consists of products that span the application space from strong defoaming to high compatibility. AIRASE® 5400 defoamer, a product in the SSDL defoamer line, is designed for applications where strong defoaming is required with good long-term persistency, especially in high shear applications. Better film compatibility than AIRASE® 5300 defoamer.

AIRASE® 5500

The AIRASE® Structured Siloxane Defoamer Line (SSDL defoamers) consists of products that span the application space from strong defoaming to high compatibility. AIRASE® 5500 defoamer, a product in the SSDL defoamer line, can be incorporated in the grind or used as a let-down defoamer. Designed for applications where good defoaming is required with good long-term persistency and film compatibility.

AIRASE® 5600

The AIRASE® Structured Siloxane Defoamer Line (SSDL defoamers) consists of products that span the application space from strong defoaming to high compatibility. AIRASE® 5600 defoamer, a product in the SSDL defoamer line, can be incorporated in the let-down of a coating or ink. AIRASE® 5600 defoamer provides an excellent balance of effective defoaming and film compatibility.

AIRASE® 5655

A compatible siloxane based letdown defoamer designed to control and quickly eliminate foam without generating defects in waterbased inks, overprint varnishes, and coatings. It does not contain added mineral oils, hazardous air pollutants (HAPs), alkyl phenol ethoxylates (APEs) or acetylenic diols. The product has multiple regional food contact compliances.

AIRASE® 5700

The AIRASE® Structured Siloxane Defoamer Line (SSDL defoamers) consists of products that span the application space from strong defoaming to high compatibility. AIRASE® 5700 defoamer, a product in the SSDL defoamer line, is formulated for incorporation in the let-down of a coating or ink and has the best compatibility in the SSDL defoamer line. AIRASE® 5700 defoamer provides an excellent balance of effective defoaming and film compatibility.

AIRASE® 8070

A proprietary formulated modified siloxane deaerator. Particularly suitable for waterborne airless and air-assisted spray applications, this product is designed to eliminate foam, pinholing and solvent popping without generating surface defects.

ZETASPERSE® DISPERSANTS

ZETASPERSE® 170

A nonionic stabilizing surfactant (100% active liquid). ZETASPERSE® 170 dispersant is a tailored combination of wetting and stabilizing chemistries that provides optimized stabilization of acidic carbon black pigments and polar inorganics like TiO₂ in waterborne coatings and inks. ZETASPERSE® 170 additive is best in conjunction with an anionic dispersant or grind resin.

ZETASPERSE® 179

A high HLB nonionic stabilizing surfactant and wetting agent. ZETASPERSE® 179 dispersant offers excellent nonionic stabilization properties for dispersion, emulsification and surfactancy benefits in a variety of waterborne applications including coatings, inks and adhesives. In pigment dispersions specifically, ZETASPERSE® 179 dispersant can be used

in the milling phase as a co-dispersant to improve the dispersion characteristics of an anionic polymeric dispersant as well as added during letdown to improve compatibility and color acceptance. ZETASPERSE® 179 dispersant contains no added APEs, offering a good alternative to highly ethoxylated alkyl phenol-based surfactants.

ZETASPERSE® 182

Our highest HLB nonionic stabilizing surfactant and wetting agent. ZETASPERSE® 182 dispersant offers excellent nonionic stabilization properties for dispersion, emulsification and surfactancy benefits in a variety of waterborne applications including coatings inks and adhesives. In pigment dispersions specifically, ZETASPERSE® 182 dispersant can be used in the milling phase as a co-dispersant to improve the dispersion characteristics of an anionic polymeric dispersant as well as added during letdown to improve compatibility and color acceptance. ZETASPERSE® 182 dispersant contains no added APEs, offering a good alternative to highly ethoxylated alkyl phenol-based surfactants.

ZETASPERSE® 1200

A high-performance dispersant (45% active solution in water and propylene glycol). ZETASPERSE® 1200 dispersant is a tailored combination of wetting and stabilizing chemistries that provides optimized viscosity, gloss, and performance for polar inorganic pigment dispersions, such as titanium dioxide and iron oxides in waterborne coatings and inks.

ZETASPERSE® 2300

A high-performance dispersant (95% active liquid with water). ZETASPERSE® 2300 pigment dispersing additive is a tailored combination of wetting and stabilizing chemistries that provides robust stabilization of most pigment and particle chemistries in waterborne coatings and inks.

ZETASPERSE® 2500

A high-performance dispersant (40% active solution in water). ZETASPERSE® 2500 pigment dispersing additive is a tailored combination of wetting and stabilizing chemistries that provides excellent viscosity stability and stabilization of demanding organic pigment chemistries in waterborne coating and ink systems. ZETASPERSE® 2500 offers exceptional viscosity stability in the dispersion of metal salt pigments and contains no added APEs; as such, it is an alternative to SURFYNOL® CT-171 additive.

ZETASPERSE® 3100

A high-performance dispersant (40% active solution in water). ZETASPERSE® 3100 dispersant is a tailored combination of stabilizing chemistries that provides outstanding stabilization of carbon black and inorganic pigment dispersions with robust letdown compatibility in waterborne coating and ink systems.

ZETASPERSE® 3400

A high-performance dispersant (29% active solution in water). ZETASPERSE® 3400 dispersant is a tailored combination of wetting and stabilizing chemistries that provides excellent color and viscosity stability in the dispersion of problematic and high-performance organic pigments such as quinacridone, perylene, azo, and metal complex chemistries in waterborne coating and ink systems.

ZETASPERSE® 3600

An anionic/nonionic pigment dispersant and wetting agent (52% active solution in water). ZETASPERSE® 3600 pigment dispersing additive is a proprietary formulation of surface active and polymeric chemistries that provides excellent milling, stabilization, and viscosity benefits in the dispersion of a wide range of organic and carbon black pigment chemistries in aqueous systems. Contains no added solvent or APEs and can be used as an alternative to SURFYNOL® CT-131 and CT-136 additives.

Continually striving to be the global supplier of choice of specialty additives in a broad range of applications and markets which value high performance solutions.



ZETASPERSE® 3700

A high-performance dispersant (40% active solution in water). ZETASPERSE® 3700 dispersant is a tailored combination of wetting and stabilizing chemistries that provides excellent color and viscosity stability in the dispersion of problematic and high-performance organic pigments such as DPP, phthalocyanine, azo and dioxazine chemistries in waterborne coating and ink systems.

ZETASPERSE® 3800

A 40% active solution in water, ZETASPERSE® 3800 dispersant is based on a nonionic comb polymer designed to offer robust stabilization across all pigment types and chemistries. ZETASPERSE® 3800 is very forgiving in formulation and a first choice for new formulation development and use across multiple different dispersion formulations.

CARBOWET® SURFACTANTS

CARBOWET® 76

An ethoxylated nonionic surfactant (HLB: 7.6). CARBOWET® 76 surfactant is an additive for pigment and substrate wetting for waterborne coatings, inks, and adhesives systems. Excellent water in oil emulsifier. FDA and EPA compliances, no added solvents or APEs.

CARBOWET® 103

CARBOWET® 103 surfactant is a proprietary formulation of relatively low HLB nonionic surfactants that provides the surface tension reduction necessary to wet both pigment and substrate, and can enhance/stabilize color acceptance in waterborne coatings, inks, and adhesives systems. FDA and EPA compliances, no added solvents or APEs.

CARBOWET® 106

CARBOWET® 106 surfactant is a proprietary formulation of nonionic surfactants designed to provide performance comparable to NP-6 type and similar alkyl phenol-based surfactants in waterborne coatings, inks, and adhesives systems. Allows for the surface tension reduction necessary to wet both pigment and substrate, and can enhance/stabilize color acceptance. FDA and EPA compliances, no added solvents or APEs.

CARBOWET® 109

CARBOWET® 109 surfactant is a proprietary formulation of nonionic surfactants designed to provide performance comparable to NP-9 type and similar alkyl phenol-based surfactants in waterborne coatings, inks, and adhesives systems. Allows for the surface tension reduction necessary to wet both pigment and substrate, and can enhance/stabilize color acceptance. FDA and EPA compliances, no added solvents or APEs.

CARBOWET® 125

An ethoxylated nonionic surfactant (HLB: 12.5). CARBOWET® 125 surfactant is a low viscosity liquid that is rapidly soluble in water and provides good surface tension reduction for substrate and pigment wetting in a wide range of applications. FDA and EPA compliances, no added solvents or APEs.

CARBOWET® 138

An ethoxylated nonionic surfactant (HLB: 13.8). CARBOWET® 138 surfactant is mid-HLB traditional surfactant with balanced properties for use in typical waterborne formulations. This low viscosity, easy-to-handle liquid provides an excellent alternative to APE chemistries of similar HLB and has a number of FDA and EPA compliances.

CARBOWET® 144

An ethoxylated nonionic surfactant (waxy solid at room temperature; HLB: 14.4). CARBOWET® 144 surfactant is an additive for pigment and substrate wetting in waterborne coatings, inks, and adhesives systems. Provides surface tension reduction and wetting, improves freeze-thaw stability of acrylic systems. Excellent oil in water emulsifier. FDA and EPA compliances, no added solvents or APEs.

CARBOWET® LSF

A nonionic wetting agent and dispersant that provides good wetting as well as good foam control to coagulant baths for both natural and synthetic rubber dipping process and in the preparation of latex tank compounds. It is an easy-to-dissolve liquid with a high cloud point that provides excellent wetting, rapid destabilization of foam, and reduced defects. No added APEs.

CARBOWET® GA-100

CARBOWET® GA-100 surfactant is a proprietary combination of nonionic wetting and stabilizing surface active chemistries. It offers low foam wetting of substrates and pigments as well as providing compatibilization and stabilization benefits in coating and ink formulations and dispersions. CARBOWET® GA-100 surfactant offers balanced performance for architectural paint formulations and excellent compatibility with associative thickeners.

CARBOWET® GA-200

A grind aid designed to provide the superior low-foam surfactancy needed in pigmented systems, which includes dynamic wetting, milling, and compatibilization benefits without the adverse impacts on water sensitivity, foam, or rheology typically found with other surfactants. Additionally, CARBOWET® GA-200 surfactant is suitable for low- or zero-VOC, low emission and EcoLabel compliant formulations.

CARBOWET® GA-210

CARBOWET® GA-210 surfactant is a proprietary combination of nonionic wetting and stabilizing surface active chemistries. It offers efficient wetting and stabilization benefits for a wide range of waterborne applications and can improve milling efficiencies in pigment grinds and dispersions. Compared to its sibling products in the GA series, CARBOWET® GA-210 surfactant offers the most universal and balanced properties and is suitable for all applications.

CARBOWET® GA-211

CARBOWET® GA-211 surfactant is a proprietary combination of nonionic wetting and stabilizing surface active chemistries. It offers low foam wetting of substrates and pigments as well as providing compatibilization and stabilization benefits in coating and ink formulations and dispersions. Compared to its sibling products in the GA series, CARBOWET® GA-211 surfactant offers the lowest foam and strongest dynamic wetting properties.

CARBOWET® GA-221

CARBOWET® GA-221 surfactant is a proprietary combination of nonionic wetting and stabilizing surface active chemistries. It offers low foam wetting of substrates and pigments as well as providing compatibilization and stabilization benefits in coating and ink formulations and dispersions. Compared to its sibling products in the GA series, CARBOWET® GA-221 surfactant offers the most stabilization benefits and a first choice for organic and carbon black pigment dispersions.

EVONIK CORPORATION

Allentown, PA 18195
1 800 345-3148
Outside U.S. and Canada 1 610 481-6799

For Technical Information and Support:

Americas: picus@evonik.com
EMEA: apcse@evonik.com

For Samples:

Americas: prodinfo@evonik.com
Asia: picasia@evonik.com
EMEA: apcse@evonik.com

For Customer Service:

US / Canada
cspolyur@evonik.com

LASA
lachim@evonik.com

Japan
pmdcsojp@evonik.com

Asia
PMD-Asia Customer Service:
pmdcso@evonik.com
APCS PMGP (Korea):
apcskr@evonik.com

EMEA:
apcsepx@evonik.com

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