



AFCONA ADDITIVES Product List



Table Of Contents

1) Company introduction	Page 1
2) Around the world	Page 2
3) 2000 Series - Defoamers and deaerators	Page 3-6
2000 Series - Silicone-based defoamers for solvent-based/free systems	Page 3-4
2000 Series - Non-silicone-based defoamers for solvent-based/free systems	Page 5-6
2000 Series - Defoamers for water-based systems	Page 5-6
4) 3000 Series - Slip&leveling and substrate wetting agents	Page 7-10
3000 Series - Silicone based slip and leveling agents for solvent-based/free systems	Page 7-8
3000 Series - Non-silicone slip and leveling agents for solvent-based/free systems	Page 9-10
3000 Series - Slip&leveling and substrate wetting agents for water-based systems	Page 9-10
5) 4000 Series - High Molecular Weight Polymeric Dispersants	Page 11-14
4000 Series - HMWD's for solvent-based/free systems	Page 11-12
4000 Series - HMWD's for water-based systems	Page 13-14
6) 5000 Series - Conventional Wetting and Dispersing Agents	Page 15-18
5000 Series - Wetting and dispersing agents for solvent-based/free systems	Page 15-16
5000 Series - Wetting and dispersing agents for water-based systems	Page 17-18
7) 6000 Series - Miscellaneous products	Page 17-18
8) Product selector guide	Page 19-20
9) Product performance data and technical guidance	Page 21-22

* For products for plastics, kindly refer to the AFCONA ADDITIVES Plastics Brochure

Company Introduction

Your preferred partner in additives

Founded in 2005, AFCONA Additives today is one of the most innovative additives suppliers in the industry. With a staff of around 250 employees worldwide, and led by a management team with decades of experience in the coatings and additives industries, the company can bank on a wealth of experience.

Celebrating 15 years in business in 2020, the company has experienced tremendous growth. It is truly a global company, with manufacturing, technical, and commercial operations on four continents. A network of dedicated sales staff and independent distributors provide exemplary service to customers around the world.

The company owes its growth to a combination of driving forces. A key to its success has been the drive for continuous innovation. Matching its R&D, Applications, and Technical Service capabilities with the needs of customers, AFCONA has been able to provide innovative solutions to the markets served and generate over 30% of its revenues from products that have been in the marketplace for less than 5 years. To ensure its innovation pipeline remains healthy and continues to grow, the company reinvests over 5% of its revenues into R&D every year.

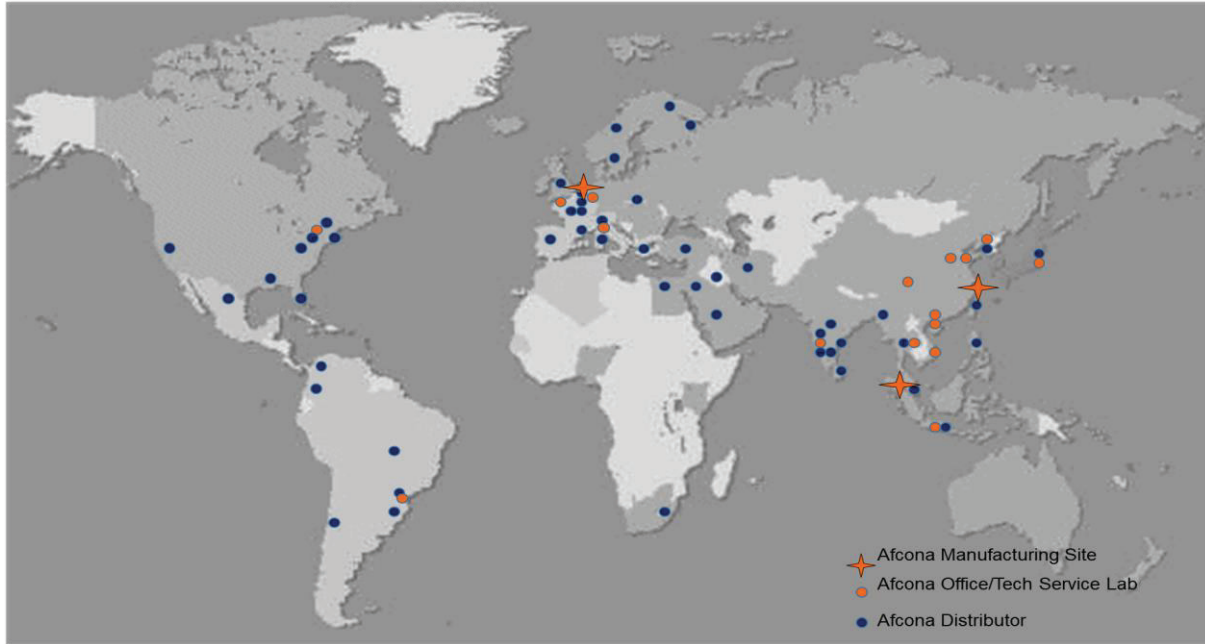
Another key to the company's success has been its ability to respond quickly to unmet market needs, with outstanding technical and commercial support. Its independent position in the market for additives and employee-driven management model has put the company in a position to both act quickly if needed, and at the same time take a long-term perspective when it comes to making decisions that drive the business.

Finally, at AFCONA, we believe that our single most important asset is our customer. We strive to fully understand our customer's needs and service them. Only our customer's success will allow us to excel.



AFCONA USA office and technical service lab in Hudson, Ohio

Around the World



Worldwide Coverage Network



AFCONA Malaysia



AFCONA China



AFCONA Netherlands



AFCONA USA



2000 Series Silicone based defoamers and deaerators for solvent-based systems

Product Name	Properties
AFCONA-2022	Very strong defoamer and deaerator. Suitable for all solvent-based systems, especially PU and baking paints. Also suitable for curtain coating applications.
AFCONA-2023	Moderate defoamer, good balance between defoaming and compatibility. Suitable for PU systems used in refinish, wood and industrial paints. Also suitable for NC and AC wood coatings and air-drying long oil and medium oil alkyds.
AFCONA-2025	Moderate defoamer, good balance between defoaming and compatibility. Very broad application from low to high polar systems. Mainly suitable for physical drying systems and air-drying alkyds.
AFCONA-2027	Specifically developed for printing ink applications. Very broad application from low polar to high polar systems. Suitable for use in all printing ink systems ranging from offset, gravure, flexo to UV systems.
AFCONA-2028	Suitable for all solvent-based applications, especially curtain coating. Works as a post-add to break the foam created during processing. Add slowly while stirring.
AFCONA-2038	The most compatible defoamer in AFCONA's range. Recommended for clear coats. Best performance in PU, Epoxy, UV and UPE systems. Widely used in clear refinish topcoats, UV systems and wood coatings.
AFCONA-2040	Universal defoamer for all systems from low to high polar, especially air-drying alkyds, physical drying systems, wood coatings, vehicle refinish and general industrial coatings. Moderate defoamer, good balance between defoaming and compatibility.
AFCONA-2045	Very compatible defoamer with good defoaming action. Particularly suitable for medium to high polar systems, such as PU, Epoxy, TPA and unsaturated polyesters. Outstanding performance in PU systems.
AFCONA-2280	100% active organically modified polyalkyl polysiloxane. Very effective deaerator and defoamer for solvent-based and solventless systems. Also acts as a leveling agents, giving smooth, level surfaces to coatings. Suitable for wood coatings, floor coatings, and general industrial coatings.
AFCONA-2721	Defoamer dissolved in a reactive solvent (HEA). Recommended for UV coatings.
AFCONA-2722	Very strong defoamer and deaerator. Suitable for high solid & high viscosity systems, such as PU and Epoxy floorings.
AFCONA-2723	Improved version of AFCONA-2720 for unsaturated polyester systems. Better transparency and defoaming properties. Also suitable for PU and Epoxy floorings.
AFCONA-2724	Deaerator with very good transparency for high solids UPE, epoxy, and polyurethane systems. Offers very good compatibility in epoxy resin systems, and also provides very good surface leveling.
AFCONA-2727	Strong defoamer, easy to incorporate. Shows very good performance for Epoxy and PU systems, especially solventless applications.
AFCONA-2763	Very strong defoamer with good compatibility and clarity in high gloss UV systems, epoxies, polyurethanes, baking paints and other high viscosity systems.
^{New!} AFCONA-2790	Strong deaerator, defoamer, and antifoam. Transports bubbles to surface and breaks them on the surface. Also acts as a leveling agent. Suitable for 2K epoxies, PU's, unsaturated polyesters, UV systems, and silk screen inks.



2000 Series Non-silicone based defoamers for solvent-based systems

Product Name	Properties
AFCONA-2018	Very good compatibility and is extremely suitable for clear and high-gloss coatings. Suitable for solvent-based wood finishes like NC, Acid Curing and PU (except for acrylic-based).
AFCONA-2020	Very strong defoamer. May cause some haziness in clear systems. Widely used in NC and AC lacquer wood finishes especially applied by curtain coater. Also suitable for cold cured epoxies as well as unsaturated polyesters like SMC, BMC and gel coats.
AFCONA-2021	Moderate performance, good balance between defoaming and compatibility. Mainly recommended for wood coatings and high polar systems. Not suitable for acrylic based systems.
AFCONA-2050	A very strong defoamer and deaerator. Economy replacement for AFCONA-2020.
AFCONA-2290	Non-silicone defoaming substance. Designed for solvent-based and solvent-free systems of Epoxy, Polyurethane, UPE and UV coating. Very good defoaming and anti-foam action. Less tendency to haze than A-2270.
AFCONA-2720	Mainly used in unsaturated polyesters, epoxies, polyester baking systems and UV coatings. Also suitable for coil and can coatings.
AFCONA-2725	Very strong defoamer and deaerator. Suitable for high solid and high viscosity systems such as UPE, PU, Epoxy and PMMA flooring.
AFCONA-2754	Anti-foam and de-aeration agent for solvent containing and solvent-free systems of Epoxy, Polyurethane, coil coatings and wood coatings.

- Can also be used in waterborne applications (system specific)



2000 Series Defoamers and deaerators for water-based systems

Product Name	Properties
AFCONA-2502	Based on a modified polysiloxane with fine silica. Very high resistance to shear forces and temperature. Suitable for pigment concentrates, coatings, printing inks, and other high filled and high solid systems.
AFCONA-2503	Defoamer for water-based applications, mainly for the preparation of pigment concentrates. Less tendency to form craters than AFCONA-2502. Also improves leveling.
^{New!} AFCONA-2505	Organically modified polysiloxane polymer with excellent defoaming and anti-foam properties in a broad range of waterbased systems. Very good in counteracting microfoam. Works very well in high shear environments.
^{New!} AFCONA-2507	Organically modified polysiloxane polymer with hydrophobic silica. Suitable for clear systems and preparation of pigment concentrates. Low tendency to form craters. Can be used as a defoamer in emulsion polymerization.
AFCONA-2524	Specifically developed for PU dispersions. Good defoaming as well as leveling and anti-crater action. Based on modified polysiloxane and very easy to incorporate, even in low-shear conditions.
AFCONA-2530	Effective defoamer for water-based systems with broad compatibility. Good balance between defoaming action and compatibility. Does not introduce haze. Best added as a post-add, or in low shear conditions.
^{New!} AFCONA-2592	Strong defoamer that can be used in high shear conditions. Will not break down under shear. Especially suited for airless spray and roller applications, to destroy microfoam and blisters.
• AFCONA-2270	Non-silicone based defoamer for water-based systems. Recommended for pigment paste preparation with excellent high-shear resistance.

- Can also be used in solventborne systems



3000 Series Silicone based Slip and leveling agents for solvent-based systems

Product Name	Properties
• AFCONA-3030	Universal slip and leveling agent for all solvent and water-based systems. Very effective in preventing Bénard Cells, and good anti-crater properties in PU. Provides moderate slip.
AFCONA-3031	Suitable for solvent-based coatings. Has high, oily-feeling slip performance. Oily effect enhances build up appearance. Good for metal coatings, refinish and baking paints. Low inner bubble sensitivity in PU coatings.
• AFCONA-3034	Fluorocarbon modified polysiloxane with strong surface tension reduction property, which results in excellent anti-crater property, substrate wetting and improved vertical leveling.
• AFCONA-3035	Specifically developed for UPE systems. Improves leveling and promotes a smoother surface to the coatings. Furthermore, suitable for UV coatings.
AFCONA-3037	Combination of high boiling point solvents. Contains a small amount of very compatible polysiloxane. Promotes the flow of the system as well as prevents solvent boiling problems that lead to pin holes.
AFCONA-3038	More polar combination of high boiling point solvents than AFCONA-3037. Promotes the flow and prevents solvent boiling problems that lead to pin holes.
AFCONA-3085	Polysiloxane based polymer with di-hydroxyl functional groups terminated at both ends. Can be cross-linked in polyurethane systems as well as in baking paints. Has very high slip and leveling performances.
• AFCONA-3230	One of the highest slip performances of AFCONA silicone based leveling agents. Low foam stabilizing effect, very good compatibility and no influence on in-can transparency. Suitable for all sb systems where high slip is needed.
AFCONA-3231	Supplied in 100% active ingredient. It has a strong slip which comes with wet feeling. Recommended for UV, metal coatings and baking paints. Furthermore, for refinish coatings as it enhances the build up appearance.
AFCONA-3233	Supplied in 100% active ingredient. Acts as a universal slip and leveling agent for all solvent-based systems. Main properties are anti-crater, slip performance and anti Bénard Cells formation.
AFCONA-3236	Polysiloxane modified with alkyl groups. It has slip, leveling and defoaming properties. Suitable for foam sensitive systems, such as, solventless PU, Epoxy and coil coating. Will cause a small degree of in-can haziness to clear coatings comparing to AFCONA-3238 and AFCONA-3239. High-temperature resistance up to 280°C.
AFCONA-3238	Better defoaming properties than AFCONA-3236 and AFCONA-3239 in medium to high polar systems. Gives moderate slip, leveling. May cause in-can haziness. Suitable for foam sensitive systems such as solventless PU & Epoxy as well as wood coatings. AFCONA-3238 is often selected in the formulation due to the defoaming properties.
AFCONA-3239	Better defoaming properties than AFCONA-3236 but less than AFCONA-3238 in medium to high polar systems. Suitable for foam sensitive systems, such as solventless PU & Epoxy. Improves matting effect of matting agent in UV coatings. Selected in formulations for the overall good performances in leveling, slip and defoaming.
AFCONA-3250	Specifically developed for applications where high slip is needed, and foam stabilization is undesirable. Also gives very good transparency. Belongs to the same family as AFCONA-3230. Whereas AFCONA-3230 is only effective in Polyurethane coatings, AFCONA-3250 is effective in all solvent-based coatings such as NC, AC, PU and baking paints.
• AFCONA-3251	Improved version of AFCONA-3250, better leveling and anti-crater performances in PU and UV coatings.
AFCONA-3280	Short-chain polysiloxane. Recoatable, will not influence intercoat adhesion. Recommended for baking paints based on alkyd-melamine, oil-free polyesters and thermosetting acrylics. Also improves hot water soaking resistance.
• AFCONA-3285	Polysiloxane based polymer with di-hydroxyl functional groups terminated at both ends, enabling AFCONA-3285 to cross-link in polyurethane systems as well as in baking paints. Has very high slip and leveling performances. 100% version of AFCONA-3085.
AFCONA-3835	Reactive polyether-modified polysiloxane with methacrylate functional group which can crosslink into UV/EB systems. This allows the formulation of coatings with permanent slip, anti-blocking, and anti-scratch performance.

• Can also be used in waterborne applications (system specific)



3000 Series Non-silicone based slip and leveling agents for solvent-based systems

Product Name	Properties	Chemical
AFCONA-3277	100% active fluorocarbon modified polyacrylic leveling agent. Can replace silicone-based leveling agents in applications where intercoat adhesion is important. Also acts as a defoamer. For highest surface tension reduction choose AFCONA-3700.	Fluorocarbon Modified Polymer
AFCONA-3670	The improved version of AFCONA - 3777. Based on the same chemistry with better anti-crater performances. Suitable for all solvent-based systems.	Fluorocarbon Modified Polyacrylic
AFCONA-3700	High fluorocarbon content polyacrylic with very strong surface tension reduction properties. Excellent anti-cratering, substrate wetting, and promotion of vertical flow. Can be used in all solvent-based systems, especially car-refinish, plastic coatings, and industrial coatings.	Polymeric Fluorocarbon
AFCONA-3730	Leveling agent based on high molecular weight polyester. Very good compatibility and leveling performance. Suitable for coil coatings, can coatings, PU's, epoxies and other solvent-based coatings.	Pure Polyester Polymer
AFCONA-3758	Pure polyacrylic leveling agent. Will provide anti-cratering, leveling, and improved substrate wetting. Delivers similar performance to fluorocarbon modified products, in a pure acrylic package.	Pure Polyacrylic Polymer
• AFCONA-3772	Fluorocarbon modified polyacrylic for solvent-based systems. Becomes water soluble after neutralization with a suitable amine. Polar polymer with very good compatibility in all resin systems. Compared to AFCONA-3730, it has stronger anti-crater properties but less leveling performance.	Fluorocarbon Modified Polyacrylate
^{New!} AFCONA-3779	Pure polyacrylic leveling agent. Polyacrylics are well known for flow and leveling performance. Also acts as defoamer in most coating systems.	Pure Polyacrylic Polymer

• Can also be used in waterborne applications (system specific)



3000 Series Slip and leveling agents for water-based systems

Product Name	Properties	Chemical
• AFCONA-3035	Normally used in solvent-based systems, but also effective as a leveling and anti-crater agent in water-based applications.	Organically modified polyether polysiloxane
AFCONA-3522	Emulsion of non polar polysiloxane in water. It gives water resistance and slip performance. No foam stabilizing effect. High dosages provide water repellent effect.	Modified polysiloxane emulsion (APE free)
AFCONA-3571	Special modified dimethylsiloxane emulsion, designed to impart improved wetting, slip, and soft feel. Compatible in most waterbased systems, easy incorporation. Gives soft feel, reduced tack, and anti-blocking.	Modified anionic polydimethylsiloxane emulsion
AFCONA-3580	Short chain polysiloxane with no influence on intercoat adhesion in multi-coat systems. Very strong anti-crater working. Must be used in combination with a suitable defoamer. Recommended for electro deposition coatings and all other water-based systems.	Organically modified polysiloxane
AFCONA-3585	Provides very strong surface tension reduction and good compatibility properties. Very fast substrate wetting and anti-crater performance in all water based systems.	Organically modified polysiloxane
AFCONA-3588	Provides very strong surface tension reduction and good compatibility properties. Very fast substrate wetting and anti-crater performance in all water based systems. Shows improved substrate wetting and anti-cratering performance in select binder systems compared to AFCONA-3585	Organically modified polysiloxane
^{New!} AFCONA-3593	Very strong substrate wetting agent, with excellent anti-crater properties. No recoatability issues between films. Strongly reduces dynamic surface tension of systems.	Organically modified polysiloxane

• Can also be used in solventborne systems



4000 Series High Molecular Weight Polymeric Dispersants for solvent-based systems

Product Name	Properties	Chemical
AFCONA-4009	Mainly used in preparation of pigment concentrates due to good compatibility and price advantage. Can also be used as dispersant for normal grinding, especially for inorganic pigments.	Modified Polyurethane Polymer
AFCONA-4010	Great selection for inorganic pigments, especially TiO ₂ and matting agents. Widely used as a dispersant for inorganic pigment for pigment concentrate preparations.	Modified Polyurethane Polymer
AFCONA-4017*	Mainly developed for co-grinding purposes for coil and can coatings, baking polyesters and acrylic, epoxy and polyurethane systems. Best co-grinding agent in the portfolio.	Modified Polyurethane Polymer
AFCONA-4046	Universal and efficient dispersant for all pigments, including organic and carbon black. Improves dry film gloss, and prevents floating and flooding.	Modified Polyurethane Polymer
AFCONA-4047	Higher molecular weight compared to AFCONA-4046 improves dispersing performance, especially with carbon black pigments to provide higher jetness. First choice for high end applications such as OEM, refinish, and industrial coatings.	Modified Polyurethane Polymer
AFCONA-4050	Lower cost alternative to AFCONA-4046. Very good dispersant for broad range of pigments. Recommended for PU, baking paint, epoxy etc.	Modified Polyurethane Polymer
AFCONA-4063*	Very effective dispersant for stabilizing inorganic and organic pigments, as well as carbon blacks. Provides very good in-can stability, through effective steric hindrance, for all types of pigments especially organic red, yellow and violet pigments.	Modified Polyurethane Polymer
AFCONA-4067*	BTX-free high molecular weight dispersing agent. Very effective in inorganic pigments, organic pigments and carbon black dispersion preparation. Very effective 3-dimensional steric hindrance design leads to good stability for all pigments especially organic reds, yellows and violets. Also gives very good viscosity reduction and improved color strength.	Modified Polyurethane Polymer
AFCONA-4071*	Improved version of AFCONA-4070 with no crystallization problem and supplied in higher solids, 45%. Overall performance is better than AFCONA-4070. Recommended for refinish, can coatings, dispersion of transparent iron oxides and other industrial coatings and pigment concentrate preparations.	Modified Polyurethane Polymer
AFCONA-4080*	Very high molecular weight dispersant with very good pigment stability performance. Especially designed for organic reds and other difficult-to-disperse pigments. Recommended for epoxies, coil coatings, fluorocarbon coatings and other high quality applications.	Modified Polyurethane Polymer
AFCONA-4201*	Polyurethane dispersant supplied in 100% active form. Recommended for solvent-free systems, where conventional wetting and dispersing agents cannot perform with organic pigments and carbon blacks. Extremely good compatibility with thermoplastic acrylic, NC and CAB. Also great choice for ink dispersions due to solvent-free nature.	Modified Polyurethane Polymer
^{New!} AFCONA-4203*	Novel type of polyester-based dispersant, supplied in 100% active form. Recommended to disperse all types of pigments, inorganic and organic, including high channel blacks. Strong viscosity depressing performance, and excellent long-term stability performance. Very suitable for low and zero VOC formulations.	Modified Polyester Polymer
AFCONA-4401*	Widely compatible dispersant, from low to high polarity systems, including TPA's. Yields high thixotropy grind pastes, also resulting in a higher grind viscosity compared to polyurethane-based dispersants. Improves gloss, DOI, color strength, while reducing flooding and floating.	Modified Polyacrylic Polymer
AFCONA-4701	Innovative dispersant based on Controlled Radical Polymerization (CRP) process. Recommended for all kinds of pigments, including difficult-to-disperse organic pigments and high channel carbon blacks. Different pigment affinic groups yield different results from AFCONA-4700, so try both to find best performing dispersant solution.	CRP Polyacrylic Polymer
AFCONA-4720	100% active dispersant based on Controlled Radical Polymerization (CRP) process. Recommended for all pigment types, including difficult-to-disperse organic pigments and high channel carbon blacks. Improved compatibility in binders where A-4701 shows less compatibility. Can be used in systems where solvents are not desirable.	CRP Polyacrylic Polymer

* These products become slightly hazy at temperatures below 5°C. This will not influence the quality



4000 Series High Molecular Weight Polymeric Dispersants for water-based systems

Product Name	Properties
AFCONA-4550*/**	Water-based pH-independent dispersant for all kinds of pigments in industrial coatings. Can be used to formulate resin-free pigment concentrates.
AFCONA-4560*/**	Water based pH-independent dispersant for all kind of pigments in architectural paints, as well as industrial coatings. Can be used to formulate resin-free pigment concentrates.
AFCONA-4565*/**	Wide compatibility in most commonly used water-based decorative and industrial coatings for all kinds of pigments. Completely water-soluble and does not necessarily need to be neutralized. However, neutralization will improve the viscosity reduction performance.
● AFCONA-4570*/**	Water-based pH-independent dispersant for all kinds of pigments. Better in viscosity depressing and pigment stability than AFCONA-4550. Can be used to formulate resin-free pigment concentrates. Also an effective additive to improve colour acceptance in different let-down media.
AFCONA-4595***	Improved version of AFCONA-4560 that gives better viscosity depression on pigments, especially carbon blacks and transparent iron oxides. Also a more effective dispersant for colorants for water-based systems.
AFCONA-4597***	Block-copolymer designed dispersant with superior water-resistance. Designed for use in both architectural paints and general industrial coatings, as well as water-based colorants. Stabilizes pigments through steric hindrance and electrical repulsion, yielding lower viscosity, stable dispersions with higher color strength and good in-can stability.
<i>New!</i> AFCONA-4598***	Very effective dispersant for universal colorants for architectural applications, as well as waterbased systems. Great performance/cost combination. Recommended for all kinds of pigments, including transparent iron oxides. Completely soluble in water, does not need to be pre-neutralized.

● Can also be used in solventborne systems

* These products will become slightly hazy at temperature below 5°C. This will not influence the quality

** Keep in a cool and dry place

*** Below 0°C separation or turbidity could occur. Warm up to 20°C and mix well

" Dosage for transparent iron oxide pigments

		Water-based System																		
Chemical	Active Ingredient	Dosage			Acid value mgKOH/g	Amine value mgKOH/g	Solvent	Flash Point	Alkyd Emulsion	Alkyd Water-reducible Emulsion	Acrylic Copolymer	Polyurethane 2 component	Polyurethane Dispersion (PUD)	Epoxy 2 Component	Polyester/Melamine	UV Curing System	Printing Inks Systems	Pigment paste water-based	Pigment paste Water and solvent-based	4000 Series
		Inorganic pigment	Organic pigment	Carbon black																Product Name
Modified polyacrylic polymer	48~52%	2~3% (2~4%)	20~40%	20~60%	-	20~35	Water	>100°C	•	•	•	•	•	•	•	•	•	•	•	AFCONA-4550
Modified polyacrylic polymer	38~42%	2~3% (2~4%)	20~40%	20~60%	-	25~35	Water	>100°C	•	•	•	•	•	•	•	•	•	•	•	AFCONA-4560
Modified polyacrylic polymer	38~42%	2~3% (2~4%)	20~40%	20~60%	-	25~35	Water	>100°C	•	•	•	•	•	•	•	•	•	•	•	AFCONA-4565
Modified polyacrylic polymer	58~60%	2~3% (2~4%)	20~40%	20~60%	-	40~50	TPM	>93°C	•	•	•	•	•	•	•	•	•	•	•	AFCONA-4570
Modified polyacrylic polymer	38~43%	4~5% (8~12%) "10~15%	12~30%	50~60%	7~15	-	Water	>100°C	•	•	•	•	•	•	•	•	•	•	•	AFCONA-4595
Special block-copolymer	38~42%	2~3% (2~4%)	20~40%	20~60%	6~13	10~16	Water	>100°C	•	•	•	•	•	•	•	•	•	•	•	AFCONA-4597
Special block-copolymer	38~43%	4~5% (8~12%) "10~15%	12~30%	50~60%	7~15	-	Water	>100°C	•	•	•	•	•	•	•	•	•	•	•	<i>New!</i> AFCONA-4598

General Indicator on recommendation

- Highly Recommended
- Recommended
- Can be used



5000 Series Conventional wetting and dispersing agents for solvent-based systems

Product Name	Properties	Chemical
AFCONA-5008*	Universal dispersant for all solvent-based systems. Can be used to prepare bentonite gels. An economic replacement for AFCONA-5044.	Unsaturated polyamide and acid ester salts
AFCONA-5009*	Economical grade wetting and dispersing agent for pigment dispersions. Designed to replace first-generation products such as AFCONA-5044, AFCONA-5054 and AFCONA-5207. Stabilizes the pigments through electrical charge repulsion forces. Very effective in bentonite gel preparation.	Fatty Acid Modified Polyamide
AFCONA-5010*	Specifically developed for pure white paints. Very good in viscosity reduction. Suitable for most solvent-based systems. Not suitable for air-drying alkyd systems.	Solution of acidic polyester phosphorous
AFCONA-5030*	Amine rich dispersing agent for carbon blacks and organic pigments. Specifically suitable for artificial leather, PU, Alkyd, Polyamide and printing ink systems.	Polymer of carboxylic acid and polyamide
AFCONA-5044*	Universal dispersant for all solvent-based systems. Can be used to prepare bentonite gels.	Unsaturated polyamide and acid ester salts
AFCONA-5054*	Higher polarity compared to AFCONA-5044. Used in low to medium polar systems. Can cause yellowing in NC. Most recommended for bentonite gel preparations.	HMW carboxylic acid salts
AFCONA-5065*	An effective co-grinding agent, containing polysiloxane. Can be used as a post-add to correct floating and flooding problems. Can give foam stabilizing effect due to the silicone modification.	HMW unsaturated carboxylic acid with polysiloxane
AFCONA-5066*	Silicone-free version of AFCONA-5065, no foam stabilizing effect. Stronger anti-settling properties.	HMW unsaturated carboxylic acid
• AFCONA-5071*	Very good anti-settling effect. Recommended for water and solvent-based systems. Extremely suitable for wash primers.	Alkylol ammonium salt of a HMW carboxylic acid
AFCONA-5207	Specifically designed for wetting and stabilization of all kinds of pigments in air-drying alkyds.	OH-functional unsat. modified carboxylic acid
AFCONA-5209*	Economical grade wetting and dispersing agent for pigment dispersions. Designed to replace first-generation products such as AFCONA-5044, AFCONA-5054 and AFCONA-5207. Stabilizes the pigments through electrical charge repulsion forces. Very effective in bentonite gel preparation. 100% active version of AFCONA-5009.	Fatty Acid Modified Polyamide
• AFCONA-5210*	100% active version of AFCONA-5010.	Acidic polyester phosphorous
• AFCONA-5220	Pourable version of AFCONA-5210. Very good with TiO ₂ and other inorganic pigments	Acidic polyester phosphorous
AFCONA-5244*	100% active version of AFCONA-5044.	Unsaturated polyamide and acid ester salts
AFCONA-5251*	Suitable for dispersing and stabilizing transparent iron oxide pigments. Can also be used as a dispersant for other inorganic pigments and extenders to reduce the dispersion viscosity, making it very useful in highly filled systems.	HMW carboxylic acid polymer
AFCONA-5280*	Improved version of AFCONA-5207 with broader resin compatibility. Offers near-HMWD performance at a price point closer to conventional wetting and dispersing agents.	Cationic/anionic copolymer with pigment affinity groups
• AFCONA-5281*	Very effective dispersing agent for organic pigments and carbon blacks. Not designed for high filler loads, but can be used with inorganic pigments if the load levels are lower in the mill base. Very broad resin compatibility.	HMW block-copolymer
• AFCONA-5285*	Good viscosity depressing wetting agent for primers and systems with high filler loads. Very good for matting agents.	Special block-copolymer
AFCONA-5290*	Suitable for all solvent based systems ranging from low polar to high polar, including air dry alkyd. Very good pigment stability, good viscosity reduction and high color strength. Supplied as a 100% active dispersant, making it an excellent dispersant for polyurethane, epoxy and UV coatings.	Polymer with pigment affinity groups

* These products will become slightly hazy at temperature below 5°C. This will not influence the quality

• Can also be used in waterborne applications (system specific)



5000 Series Conventional Wetting and Dispersing Agents for water-based systems

Product Name	Properties
● AFCONA-5071	Very good anti-settling effect. Used in combination with other dispersant for better anti-settling and anti floating & flooding performances.
AFCONA-5504	A multi-functional additive, helps wet out difficult or contaminated substrates, lowers the surface tension of the system, improves pigment grind efficiency, and prevents surface defects such as fisheyes, edge crawl, and craters. Also acts as a defoamer, and due to its hydrophobic nature, reduces water sensitivity of the final system.
AFCONA-5515	Especially suitable for the dispersion of inorganic pigments and fillers. Compared with inorganic dispersing agents, e.g. polyphosphate products, this organic polymer-based product provides improved storage stability of both the pigment dispersion and the formulated paint. Little or no adverse reaction to high temperatures or pH drift.
● AFCONA-5281	Very effective dispersing agent for organic pigments and carbon blacks. Not designed for high filler loads, but can be used with inorganic pigments if the load levels are lower in the mill base. Very broad resin compatibility.
● AFCONA-5585	Solvent-free dispersing agent for preparation of solvent and water based pigment concentrates. Suitable for all type of pigments. Compatible with many let-down systems

● Can also be used in solventborne systems



6000 Series Miscellaneous products

Product Name	Properties	Chemical	Active Ingredient
AFCONA-6220	Fatty acid modified emulsifier. Recommended to improve color acceptance of colorants in base paints. Use in colored NC can improve the gloss.	Fatty acid modified Polyester	>96%
AFCONA-6225	Improved pigment stability over AFCONA-6220. Color acceptance aid, as well as a dispersant for all kinds of pigments for water and solvent-based systems. Can be used to formulate resin free universal colorants.	Fatty acid modified Polyester	>96%
AFCONA-6226	Improved hydrophilicity over AFCONA-6225. Yields better color strength, viscosity reduction, pigment stability, and better color acceptance in water-based and solvent-based paints.	Fatty acid modified Polyester	>96%
<i>New!</i> AFCONA-6228	VOC-free and glycol-free viscosity reducer and color acceptance aid for universal colorants. Developed to reduce viscosity in VOC-free colorants and paints, without negatively influencing compatibility and color acceptance.	Fatty acid modified Derivative	>96%
AFCONA-6700	Anti-gelling agent for air-dry alkyd and baking paints. In air-dry alkyds, the ketoxime forms a protective layer to reduce oxidation. In baking paints, it helps block the reactive group of the melamine and volatilizes at 80-100°C.	Based on ketoxime and phosphorous ester salt	
AFCONA-6745	Pigment synergist for phthalocyanine, carbon black, and violet pigments. To be used in combination with a HMW dispersant. Lowers viscosity of the mill base, improves gloss, jetness, and pigment stability.	Pigment synergist	>98%
AFCONA-6755	Version of AFCONA-6745 developed for water-based systems. Also, in Automotive OEM systems that contain high amounts of alcohol or ketone solvents, AFCONA-6755 may perform better than AFCONA-6745.	Pigment synergist	>98%



a d d i t i v e s

**PRODUCT
SELECTOR**

Product Selection Guide

AIR DRY ALKYD (LONG AND MEDIUM OIL)	INDUSTRIAL BAKING PAINT ALKYD/MELAMINE/ACRYLIC/MELAMINE	AUTOMOTIVE OEM POLYESTER/MELAMINE/ACRYLIC/MELAMINE	ALKYD/NC ALKYD/AMINO(AC)	2K PU ALKYD/PE OH FUNCTIONAL	2K PU ACRYLIC OH FUNCTIONAL	2K PU ACRYLIC OH FUNCTIONAL SOLVENT FREE	UNSATURATED POLYESTER	EPOXY SOLVENT BASED	EPOXY SOLVENT FREE	CAB/ACRYLIC CAB/PE	ACRYLIC THERMO-PLASTIC	ACRYLIC/MELAMINE POLYESTER/MELAMINE (COIL COATING)
Solvent-based application												
Higher color strength	5207	5280/4010	5280	5280	4010	5290	4010/5251	5051/4010	4010	4063/4010	4010	4017
Lower millbase viscosity	5207	4067/4063	4201	4050	4063/4047	4201/4047	4017	4050/4063	4080	4067/4063	4201	4071
Better pigment stability	5207	4047/4067	4063	4067/4047	4047/4067	4201	4017	4047/4063	4080	4067/4063	4201	4071
Co-grinding	5207	4017/5066	5290	4017/5066	4017/5066	4017	4017	4017	4017	4017	5065	4071
Color acceptance	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Reduces flooding and floating	6226	5066	5065/6226	5065/6226	5065	5066	5066/6226	5066/6226	5066/6226	5066	5065/6226	5066
Cost effective	5209	5280/5290	5209	5209/5290	5290	5290	5290	5290	5290	5280	5290	5290
Improves mar resistance, increases slip	3233/3030	3251/3285	3251/3285	3251/3285	3251/3285	3236/3239	3035/3251	3236/3239	3236/3239	Not Applicable	3251/3285	3236
Anti-cratering	3233/3030	3034 + 3700	3034 + 3700	3034 + 3700	3034 + 3700	3034 + 3700	3035	3034 + 3700	3236 + 3700	3700	3034 + 3700	3034 + 3700
Improves substrate wetting	3030	3700	3700	3700	3700	3700	3700	3700	3700	3700	3700	3700
Reduces Bénard Cells	3233/3030	3233/3030	3033/3251	3030/3251	3030/3251	3700	3035/3251	3030	3700	3700	3033	3700
Improves levelling	3233/3030	3251/3285	3251	3033	3251	3236 + 3700	3035	3239	3236	3700	3251	3251
Defoaming	2040/2763	2720/2021	2720/2725	2020/2018	2754/2725	2270/2290	2020/2290	2754/2722/2790	2754/2722/2790	2021	2020/2021	2720
Deaeration	2040/2763	2022	2045/2038	2045/2038	2045/2038	2722/2727	2040/2727	2045/2727	2727/2045	2038	2040/2038	2040

Remark: / = use either one; +/ = use alone or combination; + = use in combination

	CHLORINATED RUBBER	UV CURING SYSTEM	UNIVERSAL PIGMENT PASTE SOLVENT-BASED	Solvent-based application						Water-based application							
				ALKYD EMULSION	ALKYD WATER-REDUCIBLE	EMULSION ACRYLIC COPOLYMER	POLYURETHANE 2 COMPONENT	POLYURETHANE DISPERSION	EPOXY 2 COMPONENT	POLYESTER/MELAMINE	UV CURING SYSTEM	PIGMENT PASTE WATER-BASED	PIGMENT PASTE DECORATIVE WATER-AND-SOLVENT-BASED				
DISPERSION RELATED	Higher color strength	5209/5207	4201	4071	6226	5071/6226	5071/6226	5071/6226	5071/6226	5071/6226	5071/6226	5071/6226	5071/6226	5071/6226	5071/6226	5071/6226	
	Lower millbase viscosity	5209/5207	4201/4067	4071	4595	4595	4595	4595	4595	4595	4595	4595	4595	4595	4595	4560/6226	
	Better pigment stability	5209/5207	4201/4067	4071	4595	4595	4595	4595	4595	4595	4595	4595	4595	4595	4595	4560	4560
	Co-grinding	5209	5066	Not Applicable	4595	4595	4595	4595	4595	4595	4595	4595	4595	4595	4595	4565	4565
	Color acceptance	Not applicable	Not Applicable	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226
	Reduces flooding and floating	5065	5066	5065/6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226
	Cost effective	5209	5290	5290	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226	6226
	SURFACE RELATED	Improves mar resistance, increases slip	3030/3233	3835/3251	Not applicable	3522/3233	3522/3233	3522/3233	3522/3233	3522/3233	3522/3233	3522/3233	3522/3233	3522/3233	3522/3233	Not applicable	Not applicable
		Anti-cratering	3030/3233	3034	Not applicable	3585	3585	3585	3585	3585	3585	3585	3585	3585	3585	Not applicable	Not applicable
		Improves substrate wetting	3700	3700	Not applicable	3585	3585	3585	3585	3585	3585	3585	3585	3585	3585	Not applicable	Not applicable
Reduces Bénard Cells		3030/3233	3251	Not applicable	3585	3585	3585	3585	3585	3522	3522	3522	3522	3522	Not applicable	Not applicable	
Improves levelling		3030/3233	3250+3700	Not applicable	3233	3570	3585	3585	3585	3593	3593	3593	3593	3593	Not applicable	Not applicable	
AIR RELATED	Defoaming	2040/2763	2720/2763	Not applicable	2524	2507	2524	2524	2524	2524	2524	2524	2524	2524	2524	2524	
	Deaeration	2040/2763	2720/2763	Not applicable	2503	2524	2503	2503	2503	2503	2503	2503	2503	2503	2503	2503	

Remark : / = use either one ; + / = use alone or combinot application ; * = use in combinot application

Product performance data and technical guidance

4000 Series High Molecular Weight Polymeric Dispersants

Dispersant properties and performance - solvent-based

Product Name	Viscosity Reduction	Deflocculation Inorganic Pigments	Deflocculation Organic Pigments	Carbon Black Jetness
AFCONA – 4009	--	+++	-	+ / -
AFCONA – 4010	-	+++	--	+ / -
AFCONA – 4046	+	+++	+++	++
AFCONA – 4047	++	+++	+++	+++
AFCONA – 4050	+	+++	+++	++
AFCONA – 4060	++	+++	++	++
AFCONA – 4063	+++	+++	+++ ⁺	+++
AFCONA – 4067	+++	+++	+++ ⁺⁺	+++
AFCONA – 4070	++	+++	+++	+++
AFCONA – 4071	+++	+++	+++	+++
AFCONA – 4080	+	+++	+++	++
AFCONA – 4401	--	+	+++	+

Dispersant properties and performance - water-based

Product Name	Viscosity Reduction	Deflocculation	Color Acceptance	pH range
AFCONA – 4550	+++	++	+ / -	3 ~ 13
AFCONA – 4560	++	+++	+ / -	3 ~ 13
AFCONA – 4565	++	+++	++	3 ~ 13
AFCONA – 4570	++	+++	++	3 ~ 13
AFCONA – 4595	+++	+++	+ / -	3 ~ 13
AFCONA – 4597	++	+++	++	3 ~ 13
AFCONA – 6220	+ / -	+ (mainly inorganic)	+++	3 ~ 13
AFCONA – 6225	+	+++	+++	3 ~ 13
AFCONA – 6226	++	+	+++	3 ~ 13

Recommended dosage of High Molecular Weight Polymeric Dispersants on several common pigments, fillers, and matting agents

Pigment Type	Based on solid-to-solid	Based on surface area (m ² /g)
Titanium Dioxide	2 – 3%	10% on oil adsorption
Iron Oxide pigments	3 – 4%	10% on oil adsorption
Chrome Oxide pigments	2 – 4%	10% on oil adsorption
Fillers (Clays, CaCO ₃ powder, Kaolin, Barium Sulphate)	1 – 2%	10% on oil adsorption
Matting agents	2 – 3%	10% on oil adsorption
Phthalocyanine pigments	15 – 25%	15 – 25% on BET value
Organic Reds	15 – 25%	15 – 25% on BET value
Organic Yellows	15 – 25%	15 – 25% on BET value
Organic Violets	15 – 30%	15 – 30% on BET value
Regular Carbon Blacks	20%	20% on DBP value
High Channel Carbon Blacks	30 – 50%	30 – 50% on DBP value
BET (Brunauer, Emmett, and Teller) value – Measurement of pigment surface area by using N ₂ adsorption		
DBP (DiButyl Phthalate) value – Measurement of carbon black surface area by using dibutyl phthalate		

Contact Information

For any commercial or technical questions, please contact:

AFCONA Additives USA Inc.
5685 Hudson Industrial Parkway
Hudson, Ohio 44236
USA

Tel: +1(330) 650-0971

Fax: +1(330) 650-0954

www.afcona.com

Or, contact your local representative:



AFCONA Additives Sdn Bhd
21, Jalan Anggerik Mokara 31/47,
Kota Kemuning 40460 Shah Alam,
Selangor Darul Ehsan, Malaysia
Tel : +603-5122 2289
Fax : +603-51228289
Web Site : www.afcona.com
E-mail : afcona@afcona.com.my

AFCONA Chemicals (Haiman) Co., Ltd
29, Daqing Road,
Qing-Llong Chemical Industrial Park,
Haimen, Jiangsu, 226121, P.R. China
Tel : +86 513 8265 8995
Fax : +86 513 8265 8159
Web Site : www.afcona.com
E-mail : afcona@afcona.com

AFCONA Additives B.V.
Amperestraat 34,
1704 SN, Heerhugowaard
The Netherlands
Tel : +31 (0)72-571 18 60
Fax : +31 (0)72-572 08 19
Web Site : www.afcona.com
E-mail : afcona@afcona.com

AFCONA Additives USA Inc.
5685 Hudson Industrial Parkway
Hudson, Ohio 44236
United States of America
Tel : +1(330) 650-0971
Fax : +1(330) 650-0954
Web Site : www.afcona.com
E-mail : afcona@afcona.com