



## Regional Headquarters

## Europe, Middle East and Africa UNIQCHEM GmbH

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## **Product Brochure**

Paint Additives
Ink and inkjet additives
Ambient curing systems
SMC / BMC and PVC plastisols









UNIQ<sup>®</sup>FOAM UNIQ<sup>®</sup>FLOW UNIQ<sup>®</sup>SPERSE UNIQ<sup>®</sup>JET UNIQ<sup>®</sup>VIS UNIQ<sup>®</sup>LIGHT

## **Company Introduction**

**UNIQCHEM** is a privately owned specialty additive company with holding company in the UK founded in 2009.

As the premier leader in manufacturing and development of high-performance additives, the global network of **UNIQCHEM** covers many countries in Europe, America and Asia with regional headquarters in Germany, China and USA.

The regional headquarters consisting of a dedicated team of professionals with decennia of experience in the development, application know-how, production manufacturing, technical service and sales of additives for coatings, inks, inkjet and ambient curing systems and PVC plastisols industry.

Our manufacturing and development of innovative high performance specialty additives are based in Germany and China. Global purchasing of raw materials is taking place from Germany to guarantee the consistency of our products.

Our technology platform contains of many technologies: free radical polymerization, poly-addition reactions, polycondensation reactions, hydrosililation and special blending technologies.

From our global technical service lab network, we offering our customers the best solutions of product recommendations. We are committed creating added value and improving our customers' formulations with our complete range of specialty additives offering them the right solution.

UNIQ FOAM for defoamers and air release agents, UNIQ FLOW for wetting and leveling agents, UNIQ SPERSE and UNIQ JET for wetting and dispersing agents, UNIQ LIGHT for HALS and light stabilizers and UNIQ To for specialties have achieved worldwide recognition for their performance, quality and technical innovation.

We continue to bring new technologies and products to the markets and to work collaboratively with our customers to build on our technical expertise.

Special attention is given to our development of new products. To be innovative, our products needs to give an added value to our customers. Therefore, we continuous developing new products with improved features. That our R&D is successful is proven by the sales of new product developed in the last years. New in-house developed technologies have nowadays about 50% contributions to our global sales, what should be further increase in the coming years.

We want to be your solution partner in specialty additives by strengthening your market position through technology and service, therefore our slogan is 'Customized Solutions':

- Creative Solutions to our Customers by finding solutions and sharing technical experiences through our corporation.
- Creative Solutions to our employees by offering them career opportunities and a safe and healthy working environment.
- Creative Solutions for the future and our environment by making use of environmentally friendly raw materials and less or/and non-polluting products serving the new upcoming technologies.

Our goal is to be the fastest growing and most competitive supplier of specialty additives in this market by offering the best service, supply and samples by our communication, corporation and commitment to you.









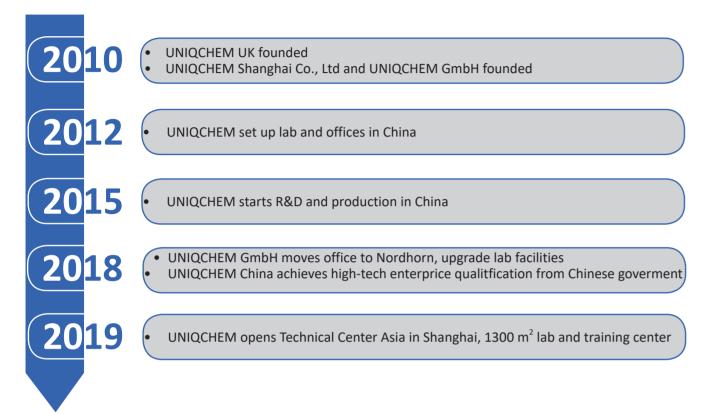


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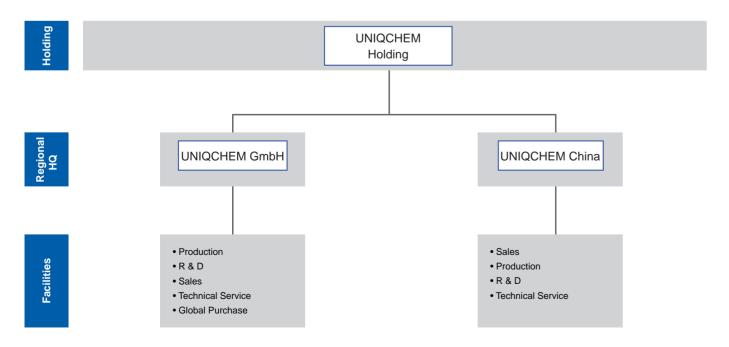
## **History**

## **Global organisation**





## **Company structure**



## **Product lines and nomenclature**

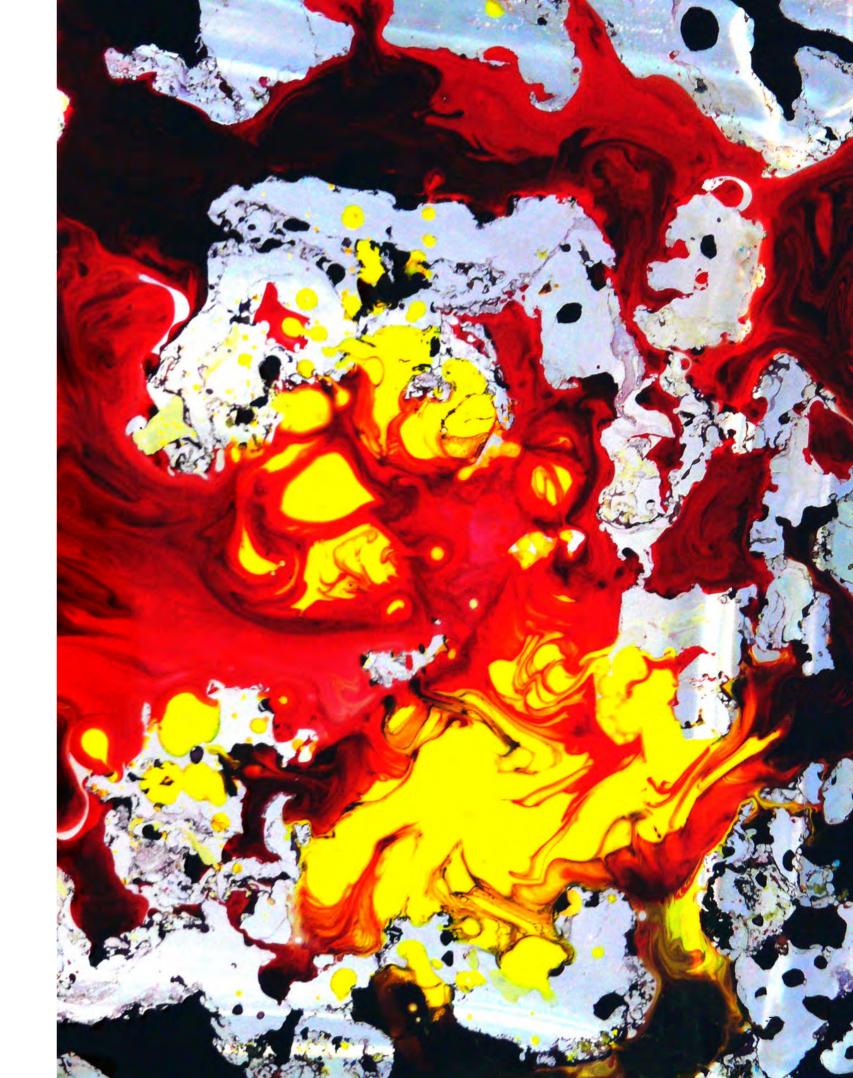
	Brandname	Coatings	Ink	Plastic
Defoamers / Air release additives	UNIQ <sup>®</sup> FOAM	100 - 200	7000	P-5xx
Flow and wetting additives	UNIQ <sup>®</sup> FLOW	300 - 400	6000	P-3xx
Wetting and Dispersing additives	UNIQ <sup>®</sup> SPERSE UNIQ <sup>®</sup> JET	500 - 600 - 700	9000 9000	P-1xx - P-9xx
Rheology modifiers	UNIQ®VIS	800		
Light stabilizers	UNIQ <sup>®</sup> LIGHT	900		



S = Solvent based W = Water borne U = Universal



# Additives for Paint and Coatings







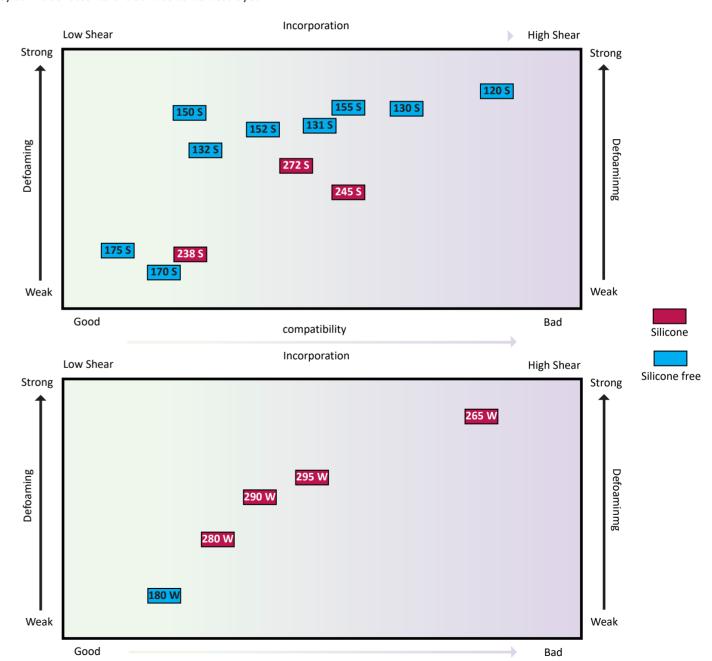
PRODUCT	DESCR	DOSAGE (%)	PROPERTIES	WB	SB	SF
DEFOAMERS						
UNIQ®FOAM 120 S		0.1-0.7	Strong defoamer, can cause haze in high gloss clear coatings			
UNIQ®FOAM 130 S		0.1-1.0	Strong defoamer, very suitable for UPE and clear coating		•	
UNIQ®FOAM 131 S		0.1-1.0	Strong defoamer, very suitable for clear coating			
UNIQ®FOAM 132 S		0.1-1.0	Strong defoamer, very suitable for clear coating			
UNIQ®FOAM 150 S	Non silicone	0.1-1.0	is a strong defoamer especially suitable for solvent free epoxy and solvent free UV system.			
UNIQ®FOAM 152 S	Non sincone	0.1-1.0	Suitable for solvent free epoxy and solvent free UV system. Good working against micro- and macro-foam			
UNIQ®FOAM 155 S		0.1-0.5	Suitable for solvent free epoxy system with strong working against micro-foam		•	•
UNIQ®FOAM 170 S		0.1-1.0	Suited for UPE, HS coatings like epoxy and 2K PU			
UNIQ <sup>®</sup> FOAM 175 S		0.1-1.0	Suited for OPV, UV and High gloss coatings			
UNIQ®FOAM 180 W		0.3-3.0	Levelling and anti-popping additive			
UNIQ®FOAM 235 S		0.1-0.7	All round defoamer for spray, rolling, brushing and curtail coatings		•	
UNIQ <sup>®</sup> FOAM 238 S		0.1-1.0	Suited for top coating		-	
UNIQ®FOAM 245 S		0.1-0.7	All round defoamer for spray, rolling, brushing and curtail coatings, with strong micro-foam destroying		•	
UNIQ <sup>®</sup> FOAM 265 W		0.1-0.3	Strong defoamer for grinding conditions			
UNIQ <sup>®</sup> FOAM 272 S	Silicone	0.1-1.0	Very suited for HS epoxy and 2K PU coating system			
UNIQ®FOAM 280 W		0.2-1.0	Defoamer for high gloss coating, coating systems, excellent compatibility			
UNIQ®FOAM 290 W		0.1 - 1.5	Excellent defoaming with good compatibility suited for top- and clear coats			
UNIQ®FOAM 291 W		0.1 - 1.0	Strong high shear stable defoamer for topcoats, suited for airless and airmix spraying.			
UNIQ®FOAM 295 W		0.1 - 1.0	Strong high shear stable defoamer for grinding processes			

In industrial processes, foam can cause serious problems like:

- They cause defects on surface coatings.
- They prevent the efficient filling of containers.

To avoid these issues, the need for a defoamer or air-release agents is necessary. UNIQCHEM offers these additives under the brand **UNIQ®FDAM**.

A defoamer or an anti-foaming agent is a chemical additive that reduces and hinders the formation of foam in industrial process liquids or is added to break a formed foam already. We can make a distinction between macro- and micro-foam. Macro-foam is often formed at the surface of the coating and micro-foam is entrapment of small air bubbles, they are not able to raise fast enough to the surface. For micro foam you need a so-called air release agent to coagulate the micro bubbles to bigger air bubbles so they can raise faster to the surface to be destroyed.







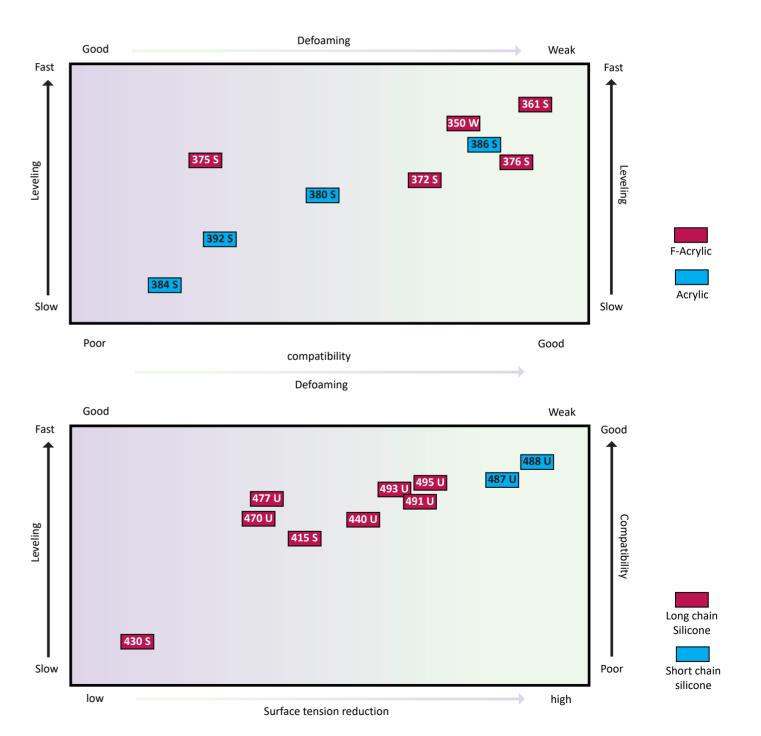
PRODUCT	DESCR.	ACTIVE	DOSAGE	PROPERTIES	WB	SB	SF
			(% <b>)</b>				
Wetting agents and	Surface mod	difiers					
UNIQ®FLOW 350 W		100	0.1-0.5	Anti-crater and leveling			
UNIQ®FLOW 361 S		100	0.01-0.5	Anti-crater and wetting for high gloss coating, causing no haze			
UNIQ®FLOW 372 S	Fluor Modified Acrylate	60	0.1-2.0	All round levelling agent, more polar, no haze in clear		•	
UNIQ®FLOW 375 S		70	0.5-1.0	All round levelling agent			
UNIQ®FLOW 376 S		70	0.5-1.0	Suitable for high gloss clear coating, fast leveling and high clarity.		•	
UNIQ®FLOW 380 S		100	0.5-1.5	Leveling agent with deaeration properties			
UNIQ®FLOW 384 S	Acrylic	100	0.5-1.5	Leveling agent with strong defoaming performances			
UNIQ®FLOW 386 S	polymer	52	0.5-1.5	Leveling agent with balanced performance			
UNIQ®FLOW 392 S		52	0.2-1.0	Leveling agent with anti popping and deaeration properties		•	
UNIQ®FLOW 400 U		52	0.1-0.3	All round silicone leveling agent			
UNIQ®FLOW 415 S		15	0.5-1.0	Very good short wave leveling with good slip performance			
UNIQ®FLOW 430 S		100	0.05-0.5	Levelling agent with strong air-release properties			
UNIQ®FLOW 437 S	Modified Polysiloxane	NA	2.0-5.0	Prevent pinholes, needles, blisters			
UNIQ®FLOW 440 U		52	0.1-0.3	Anti-crater and high slip			
UNIQ®FLOW 470 U		100	0.1-1.0	Very good leveling in UV coating with strong tape release			
UNIQ®FLOW 477 U		100	0.1-1.0	Very good leveling and wetting, high slip and suitabe for UV coating			
UNIQ®FLOW 487 U	short chain	100	0.1-1.0	Surface tension reduction, anti-crater and low foam, no influence on recoatability			
UNIQ®FLOW 488 U	polysiloxane	100	0.1-1.0	Strong surface tension reduction and excellent wetting properties, good compatibility, no inlfuence on recoatability	•		•
UNIQ®FLOW 491 U		100	0.1-0.5	Very good short wave leveling with good slip performance, high clarity			
UNIQ®FLOW 493 U	Modified Polysiloxane	100	0.05-0.3	Anti-crater, levelling with handfeeling			
UNIQ <sup>®</sup> FLOW 495 U		100	0.05-0.3	Silicone leveling agent with excellent handfeeling			

Flow and leveling agents playing a very important role for the superior appearances of your coating.

These additives are needed to avoid problems like: orange peel, Bernard cell formation, floating, flooding, craters, fish eyes, fat edge (also called edge crawling).

Leveling agents, due to the strong surface tension reduction properties can offer good wetting and leveling. (Fluor modified) Acrylic leveling agents gives good long wave leveling and anti-crater performances.

These wetting and leveling agents are offered by UNIQCHEM under the brand of UNIQ. FLOW.



-10--11-





## UNIQ®SPERSE

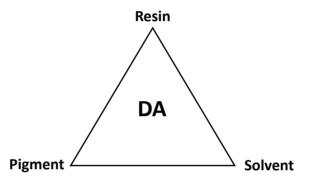
PRODUCT	DESCRIPTION	ACTIVE	AMINE VALUE	ACID VALUE	PROPERTIES	WB	SB	SF
Dispersing Agents								l
UNIQ®SPERSE 510 S		51	6	12	Suited for TiO2, inorganic pigments and matting agents		•	
UNIQ®SPERSE 550 S	PU dispersant	45	14		General Industrial coatings, organic and inorganic pigments			
UNIQ®SPERSE 560 S		30	8		Dispersant for high performance requirements like high transparency, jetness		•	
UNIQ®SPERSE 580 U	Structured Polymer	100	52		OEM, Refinish and 3C coatings, HPP organic pigments. Excellent jetness black in WB			
UNIQ®SPERSE 605 S	Polyester	40	17		Excellent jetness black and transparency for HPP organic pigments.			
UNIQ®SPERSE 615 S	Dispersant	40	18		Suited for transparent and opaque organic and black pigments.		•	
UNIQ®SPERSE 630 U	Structured Polymer	100	40		OEM, Refinish and 3C coatings, HPP organic pigments.	•	•	•
UNIQ®SPERSE 650 U	Modified Acrylic Polyester	100	2	18	Very all round dispersing agent, suited for organic (incl transparent pigments) and inorganic pigments	•	•	•
UNIQ®SPERSE 670 U	Structured Polymer	100			Dispersing agents for transparent iron oxide and matting agents		•	
UNIQ®SPERSE 680 U	Structured Polymer	100	65	9	OEM, Refinish and 3C coatings, HPP organic pigments. Excellent jetness black in SB			
UNIQ®SPERSE 685 U	Modified Acrylic Polyester	100	5	18	Industrial application, epoxy flooring, avoids color floatations			
UNIQ®SPERSE 690 W	Modified Block Polymer	40		10	Suited for organic and inorganic pigments, excellent compatibility			
UNIQ®SPERSE 710 S	Phosphoric	52		60	Excellent for TiO2, fillers and extenders, low viscosities			
UNIQ®SPERSE 711 S	acid	100		120	100% version of 710S		•	•
UNIQ®SPERSE 730 U	Carboxylic acid polyester	100		100	Universal dispersant for TiO2, extenders and fillers, strong viscosity reduction			
UNIQ®SPERSE 740 U	Unsaturated	100		290	100% version of 745S			
UNIQ®SPERSE 745 S	polyamide and acid ester salts	50		130	improve the pigment wetting and activation of organically Bentonites			
UNIQ®SPERSE 764 S		52		120	Anti flooding dispersant			
UNIQ®SPERSE 765 S	Unsaturated Carboxylic Acid	52		120	Anti flooding dispersant with silicone			
UNIQ®SPERSE 770 U		100	85		Dispersant for low polar resins, like long oil alkyd systems			

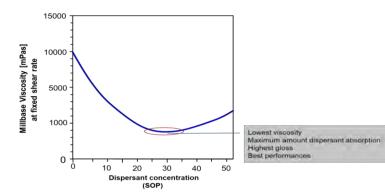
Dispersing agents playing a very important role for the wetting and stabilization of pigments.

The faster the wetting is taking place the faster the stabilization can take place. In this process it is important to be able to reduce the particle size back to the primary particle of the pigment. Than you will achieve the maximum color strength. Very good dispersing agents will offer you very good viscosity reduction, color strength, reduction in processing time.

These Wetting and dispersing agents are offered by UNIQCHEM under the brand **UNIQ**\***SPERSE**.

Very important is to identify the right SOP (solid dispersant on pigment) what depends on the pigment type (color index), surface area, resin and solvent type and may differ from resin to resin and pigment to pigment. Ladder study for optimized dosage on dispersing agnet on pigment is required.





	Inorganic pigments		Organic	HPP organic pigments HCC black pigments					
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bas				560S	,				
/ent			550S		į.				
Sol	5108 /	/ 650U			į				
	710S / 730U				į				
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-12-



## Notes



**UNIQ**® VIS is our brand for some special products, like rheology control agents and conductivity agents.

PRODUCT	DESCRIPTION	DOSAGE (%)	PROPERTIES	WB	SB
Specialties					
UNIQ®VIS 840 W	Modified urea	3-10	Prevent drying out of pigment paste		
UNIQ <sup>®</sup> VIS 880 S	Alkylolammonium salt	0.1-2	Increase the Conductivity of Electrostatically Sprayed Solvent-Borne Coatings		



**UNIQ** LIGHT is the brand for our light stabilizers suitable for wood-, plastic-, industrial-, coil-, and automotive coatings. These products can improve the weather resistance of coatings.

PRODUCT	DESCRIPTION	DOSAGE (%)	PROPERTIES	WB	SB
Light Stabilizers					
UNIQ <sup>®</sup> LIGHT 900	Triazine	1-3	High performance UV absorber		
UNIQ <sup>®</sup> LIGHT 923	HALS	0.5-2	Acid system HALS		
UNIQ <sup>®</sup> LIGHT 992	HALS	0.5-2	Cost effective HALS		
UNIQ <sup>®</sup> LIGHT 930	Benzotriazole	1-3	Common used UV absorber		
UNIQ <sup>®</sup> LIGHT 940	hydroxyphenyl-triazine	1-3	High performance UV absorber		
UNIQ <sup>®</sup> LIGHT 951	Dland	1-3	Blend light stabilizer		
UNIQ <sup>®</sup> LIGHT 960	Blend	1-3	Blend light stabilizer		

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-14-



# Additives for Ink and Inkjet









- They cause defects on surface coatings.
- They prevent the efficient filling of containers.

To avoid these issues, the need for a defoamer or air-release agents is necessary. UNIQCHEM offers these additives under the brand UNIQ®FDAM.

A defoamer or an anti-foaming agent is a chemical additive that reduces and hinders the formation of foam in industrial process liquids or is added to break a formed foam already. We can make a distinction between macro- and micro-foam. Macro-foam is often formed at the surface of the coating and micro-foam is entrapment of small air bubbles, they are not able to raise fast enough to the surface. For micro foam you need a so-called air release agent to coagulate the micro bubbles to bigger air bubbles so they can raise faster to the surface to be destroyed.





Flow and leveling agents playing a very important role for the superior appearances of your coating.

These additives are needed to avoid problems like: orange peel, Bernard cell formation, floating, flooding, craters, fish eyes, fat edge (also called edge crawling).

Leveling agents, due to the strong surface tension reduction properties can offer good wetting and leveling.

(Fluor modified) Acrylic leveling agents gives good long wave leveling and anti-crater performances.

These wetting and leveling agents are offered by UNIQCHEM under the brand of UNIQ®FLOW.

PRODUCT	DESCR.	ACTIVE	DOSAGE (%)	PROPERTIES	WB	SB	UV
Wetting agents and Surface modifiers							
UNIQ®FLOW 6085		100	0.1-0.5	Excellent fast leveling, good substrate wetting, good defoaming and heat stable			
UNIQ®FLOW 6097	Fluor Modified	100	0.01-0.5	Excellent fast leveling, good substrate wetting, good defoaming and heat stable			
UNIQ®FLOW 6109	Acrylate	60	0.1-2.0	Compatible in water borne and solvent borne, helps in leveling and substrate wetting, suitable in high gloss application	•	•	•
UNIQ®FLOW 6113		70	0.5-1.0	Helps in leveling and substrate wetting, suitable in high gloss application			
UNIQ®FLOW 6124	Acrylate	52	0.5-1.5	Good compatibility, and improved leveling, good recoatability and heat stable			
UNIQ®FLOW 6135		100	0.1-1.0	Excellent substrate wetting, good recoatability			
UNIQ®FLOW 6342	PDMS	100	0.05-0.3	Good substrate wetting and leveling, improved slip hand feeling, improves scratch resistance			
UNIQ®FLOW 6344		100	0.05-0.3	Good substrate wetting and leveling, improved slip hand feeling			

-18-



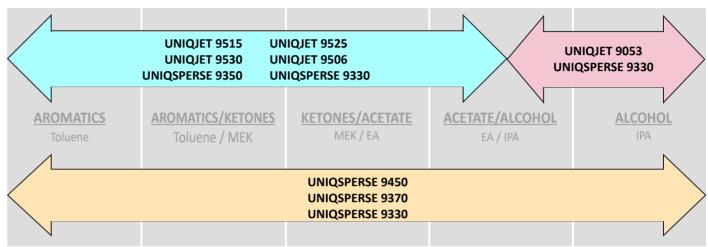




PRODUCT	DESCRIPTION	ACTIVE		ACID VALUE	PROPERTIES	WB	SB	UV
Dispersing Agents								
UNIQ®SPERSE 9350		45	14		Good compatibility with resins and solvents. Suitable for all pigments dispersion		•	
UNIQ®SPERSE 9450		100	2	18	Suitable for universal tinters for all pigments dispersion. Especially good in TiO2 and inorganic pigments dispersion with good sedimentation and anti-floating properties	•	•	٠
UNIQ®SPERSE 9310		52		60	${\rm TiO_2}$ and inorganic pigments dispersion, excellent in viscosity reduction		•	
UNIQ®SPERSE 9330	Polymeric	100		100	TiO <sub>2</sub> and inorganic pigments dispersion, excellent in viscosity reduction	•	•	
UNIQ®SPERSE 9304		52		120	Anti-floating and flooding, good for co-grinding system		•	•
UNIQ®SPERSE 9305		52		120	Anti-floating and flooding, good for co-grinding system. Suitable for metal pigment orentation		•	•
UNIQ®SPERSE 9370		100	85				•	

PRODUCT	DESCRIPTION	ACTIVE		ACID VALUE	PROPERTIES	WB	SB	UV	
Dispersing Agents									
UNIQ®JET 9506		30	8		Good color developing for most of the organic pigments, improved viscosity, gloss and color strength		•		
UNIQ®JET 9510		40	17		Organic and inorganic pigments dispersion, excellent for jetness improvement of carbon black		•	•	
UNIQ®JET 9520		40	18		Suitable for all pigments dispersion in solvent borne and UV system		•	•	
UNIQ®JET 9530		100	2	18	Suitable for magenta pigments dispersion in solvent borne and UV system			•	
UNIQ®J€T 9550	Polymeric	100			Suitable for magenta pigments dispersion in solvent borne and UV system			•	
UNIQ®JET 9560		100			Suitable for magenta pigments dispersion in solvent borne and UV system			•	
UNIQ®JET 9053		100	5	18	Suitable for universal tinters for all pigments dispersion. Especially good in TiO2 and inorganic pigments dispersion with good sedimentation and anti-floating properties	-	•	•	
UNIQ®JET 9012		40		10	Suitable for all the pigments, can be used for pigment concentrates				

### **Gravure ink**



## Flexographic ink

Solvent based	Water based
UNIQJET 9053	UNIQJET 9012
UNIQSPERSE 9450	UNIQSPERSE 9450
UNIQSPERSE 9330	UNIQSPERSE 9330

## **UV Offset ink**

UNIQJET 9510 UNIQJET 9520 UNIQSPERSE P-134	UV	
OIVIQUI LIVUL 3000	UNIQJET 9520	

## **Inkjet SB and UV**

BLUE 15:4 UNIQJET 9510 UNIQJET 9515	RED 146 UNIQJET 9530  RED 122 RED 202 VIOLET 19 UNIQJET 9520  RED 254 UNIQJET 9510 UNIQJET 9515	YELLOW 180 UNIQJET 9510 UNIQJET 9550  YELLOW 150 UNIQJET 9510 UNIQJET 9515 UNIQJET 9560	BLACK 7 UNIQJET 9510 UNIQJET 9515

## **Inkjet WB**

Water based	
UNIQJET 9053 UNIQJET 9012	

**-21**-



Additives for Composites, SMC/BMC, **Ambient curing** systems and **PVC** plastisols





UNIQCHEM offers a full range of additives for the ambient curing systems, PVC plastisols and composites. This is a range of defoamers, flow agents with strong defoaming properties, wetting and dispersing agents and rheology additives enhancers.

## Air release

PRODUCTS	UPR	PUR	Ероху	PVC	Features
UNIQ°FOAM P-509	•		•	•	Strong anti-foam and air-release agent especially suitable for ambient-curing plastic systems. Especially suitable for unsaturated polyesters and epoxy based systems.
UNIQ*FOAM P-540	•				Silicone-free anti-foam and air-release agent and furthermore helps to improve the leveling and avoids pinholing or popping and improves the fiber wetting. It's suitable for unsaturated polyester systems, gel coats and cast resins. It is also recommended for pultrusion applications with acrylic, unsaturated polyester and vinyl ester resins.
UNIQ <sup>®</sup> FOAM P-555	•	•	•	•	Silicone-free strong anti-foam and air-release agent especially suitable for ambient-curing plastic systems, adhesives and sealants. Especially suitable for unsaturated polyesters.
UNIQ <sup>®</sup> FOAM P-570		•	•		Silicone containing strong anti-foam and air-release agent especially suitable for ambient- curing plastic systems, adhesives and sealants and coating industry. Especially suitable for epoxy based systems
UNIQ <sup>®</sup> FOAM P-571	•	•	•	•	Silicone-free strong anti-foam and air-release agent especially suitable for ambient-curing plastic systems, adhesives and sealants and coating industry. Especially suitable for epoxy based systems, odour free version of P-570
UNIQ <sup>*</sup> FOAM P-575		•			Strong anti-foam and air-release agent especially suitable for ambient-curing plastic systems, adhesives and sealants and coating industry, especially for epoxy and PU based resin systems. The additive furthermore helps to improve the leveling and avoids pinholing or popping.
UNIQ <sup>®</sup> FOAM P-595	•				Strong anti-foam and air-release agent especially suitable for ambient-curing plastic systems. Especially suitable for unsaturated polyesters and epoxy based systems.
UNIQ*FOAM 245S		•			Recommended for roller, brush and conventional spray application, very suitable also for systems ranging from low polar to high polar with strong working in against micro-foam. The defoamer is highly effective for solvent based and solvent free coating systems
UNIQ*FOAM 152 S		•			Strong defoamer, silicone free, can be used for all solvent borne coating systems, especially suitable for solvent free epoxy and solvent free UV system. The additive has an immediate foam-destroying effect with very strong deaeration and does not have influence on the intercoat adhesion.

## **Leveling/Substrate wetting**

PRODUCTS	ACTIVE %	UPR	PUR	Ероху	PVC	Features
UNIQ°FLOW P-304	100	•	•	•	•	Acrylic leveling agent for solvent based and solvent free systems. It's very suitable for gel coats that are base on unsaturated polyesters, epoxides and polyurethanes. The product shows excellent defocaming and leveling performances.
UNIQ <sup>®</sup> FLOW 415 S	15	•	•			Highly effective silicone additive, provides a strong reduction of surface tension.  Offers good wetting of critical substrates. In pigmented systems it can prevent the formation of Bénard cells and improve leveling.
UNIQ <sup>®</sup> FLOW 361 S	100	•	•	•	•	Silicone free and can offer strong reduction of surface tension, improves wetting effect and has strong anti-crater performances. Meanwhile, it shows the good performance of fast wetting and leveling on difficult corners to achieve good film build up.
UNIQ <sup>®</sup> FLOW 495 U	100	•	•	•		Modified polyether polysiloxane leveling agents. The additive gives strong surface tension reduction properties in coatings. The substrate wetting is improved and therefore can also act as an anti-crater agent. Minimized foam stabilization
UNIQ°FLOW 386 S	50			•	•	Acrylic leveling agent for solvent based coating systems showing excellent compatibility and good leveling performances.
UNIQ*FLOW 375 S	70			•		Modified acrylic leveling agent to be used in solvent based coating systems showing some defoaming performances.







## **Wetting and Dispering Additives**

PRODUCTS	ACTIVE %	UPR	PUR	Ероху	PVC	Features
UNIQ <sup>®</sup> SPERSE P-114	50	•		•		Wetting and dispersing additive for filled unsaturated polyester, epoxy systems eg calcium carbonate and ATH. Strong viscosities reduction.
UNIQ SPERSE P-120	100	•	•	•	•	Wetting and dispersing agent to reduce viscosity and prevents fillers from settling in ambient curing resins and adhesives as well for polyester molding compounds
UNIQ SPERSE P-130	100	•		•		Excellent suited for Solvent free epoxy for strong viscosity reduction of the filler paste improving viscosity and leveling.
UNIQ*SPERSE P-133	100			•	•	Solvent-free wetting and dispersing additive, very suitable for solvent-borne and solvent- free adhesives, PVC plastisol, ambient curing resin systems, and for the production of color master batches for thermoplastics. Particularly recommended for basic carbon black pigments.
UNIQ"SPERSE P-134	100			•	•	Solvent-free wetting and dispersing additive, very suitable for solvent-borne and solvent-free adhesives, PVC plastisol, ambient curing resin systems, and for the production of color master batches for thermoplastics. Particularly recommended for acidic carbon black pigments. Excellent anti-separation additive for UPR and thermoplastic resins.
UNIQ SPERSE P-135	100		•		•	Solvent-free wetting and dispersing additive, very suitable for solvent-borne and solvent- free adhesives, PVC plastisol, ambient curing resin systems, and for the production of liquid color master batches for thermoplastics.
UNIQ SPERSE P-137	100		•	•	•	Solvent-free wetting and dispersing additive, very suitable for solvent-borne and solvent- free adhesives, PVC plastisol, ambient curing resin systems, and for the production of liquid color master batches for thermoplastics.
UNIQ*SPERSE P-138	30	•	•			Wetting and dispersing additive for SMC/BMC and pultrusion to homogenize and stabilize the system, and to increase the color homogeneity in molding compounds. Improved fiber wetting and therefore optimized properties. Additive to prevent phase separation in PS-UP filled molding compounds.
UNIQ <sup>®</sup> SPERSE P-141	50	•	•	•		Wetting and dispersing additive for amine-accelerated UP, EP and, PUR systems and adhesives to reduce the viscosity in mineral-filled systems. Strong viscosities reduction.
UNIQ SPERSE P-144	50	•	•	•	•	Wetting and dispersing additive for filled unsaturated ployester resins as well PU, epoxy and acrylic to reduce viscosity and prevent settling
UNIQ*SPERSE P-145	100	•	•	•	•	Processing additive with mold release properties for low-shrink SMC and BMC. The zinc stearate that is usually used as a mold release agent is completely replaced by the additive, which can simplify raw material handling. The most important property is the antiseparation of the LS-SMC/BMC compounds and thus cobwebbing is reduced.
UNIQ <sup>®</sup> SPERSE P-160	50	•	•	•		wetting and dispersing additive in unsaturated resin systems and adhesives. The additive prevents the flooding/floating and settling of pigments and fillers in epoxy and VE/UP-based laminates. Reduction in the flooding/floating of colored pigments in gel coats.
UNIQ*SPERSE P-185	100		•	•		Esolvent-free wetting and dispersing additive, very suitable for solvent-borne and solvent-free adhesives, PVC plastisols, ambient curing resin systems, and for the production of color masterbatches for thermoplastics. Particularly recommended for organic pigments, inorganic pigments, carbon black and co-grinding processes.
UNIQ <sup>®</sup> SPERSE P-190	100	•	•	•	•	Wetting and dispersing additive for filled, unsaturated polyester systems and epoxy systems, also suited for gelcoats to avoid flooding and floating of TiO2
UNIQ <sup>®</sup> SPERSE P-191	100	•		•	•	wetting and dispersing additive for filled unsaturated polyester. The dispersant is especially suitable for inorganic pigments, filler pigments and ATH. Strong viscosities reduction.
UNIQ SPERSE P-199	100	•		•		wetting and dispersing additive for filled unsaturated polyester eg calcium carbonate and ATH. Strong viscosities reduction.
UNIQ*SPERSE P-950	100				•	Solvent-free wetting and dispersing additive for PVC plastisols and thermoplastics applications. It's suitable for producing liquid color masterbatches. The dispersant is highly recommended for inorganic pigments, zinc oxide, blowing agents (azodicarbonamide) and fillers. Strong viscosity reduction.
UNIQ <sup>®</sup> SPERSE P-962	100				•	Wetting and dispersing additive for PVC plastisols for a better incorporation of inorganic pigments and fillers. Increases the color strength, minimizes settling and prevents the separation of the plasticizer, particularly recommended for inorganic fillers, zinc oxide and blowing agents (azodicarbonamide).
UNIQ SPERSE P-405	100	•	•	•	•	liquid rheology additive for plastic applications such as vinyl ester and epoxy resins, unsaturated polyester resins, and gel coats. It can reinforce the rheological effectiveness of fumed silica and organophilic phyllosilicates (organoclays).

-24-



## **Additives recommendation**

## Adhesives and sealants

		Wetting &	Defoamers		
	Inorganic /	Organic	Co-grinding /	Leveling	
	fillers	pigments	post add		
		UNIQSPERSE		UNIQFLOW	UNIQFOAM
Gelcoat	P-190	P-185	P-160	P-304	P-555
	LP8730	P-135		415S	P-570
				495U	P-571
UPR - putties	P-144			P-304	P-555
	P-141				P-571
	P-120				
Composites	P-130	P-185	P-134	P-304	P-555
ероху	P-190	P-134	P-160	415S	P-570
, ,	LP8730	P-135	P-185	495U	P-571

	Wetting and dispersing agents	Processing agents	Anti-separation agents	Fiber wetting agents	Defoamers
		UNIQFOAM			
SMC/BMC	P-114	P-145	P-134	P-134	P-540
	P-191	P-405	P-136	P-138	P-555
	LP8730		P-138		P-571

	TiO <sub>2</sub>	Inorganic	Organic	Carbon Black				
		pigments	pigments	Acidic / Neutral	Basic			
	UNIQSPERSE							
Thermoplastics -	P-950	P-191	P-134	P-134	P-133			
liquid	P-191	P-185	P-135	P-135				
masterbatches	LP8730	P-130	P-137					
		LP8730						

	TiO <sub>2</sub>	Inorganic pigments	Organic pigments	Carbon Black	Defoamers
			SPERSE		UNIQFOAM
PVC plastisols	P-950	P-191	P-134	P-134	P-555
	P-191	LP8730	P-135	P-135	P-509
	LP8730		605S / 615S		P-595
					P-571



	Defoamer	Substrate	Rhed	ology	viscosity	wetting and	dispersing
		wetting	thixotropic	anti-sagging			
Polyurethane	245S	493U	P-405		P-141	P-120	
	P-555	495U			P-134	P-144	
Ероху	P-570	493U	P-405		P-134	P-120	P-160
	P-571	495U			P-185	P-144	
	P-555						
Acrylic		493U	P-405		P-141	P-120	P-160
		495U				P-144	
Water based	280W	488U			<u>Inorganic</u>		
	290W	487U			P-130		
	295W				Organic & Blac	<u>ck</u>	
					680U		
UV systems	P-555	495U			<u>Inorganic</u>		
	245S	477U			P-130	P-190	LP8730
					Organic & Black		
					P-134/P-133	P-185	P-135

26-