



## PRODUCT BROCHURE

*Performance additives for paints and coatings,  
ink, inkjet and composite market*



## Company Introduction

**UNIQCHEM** is a privately owned specialty additive company with holding company in the UK founded in 2010.

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, poly-condensation reactions, hydrosilylation 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®VIS** 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.

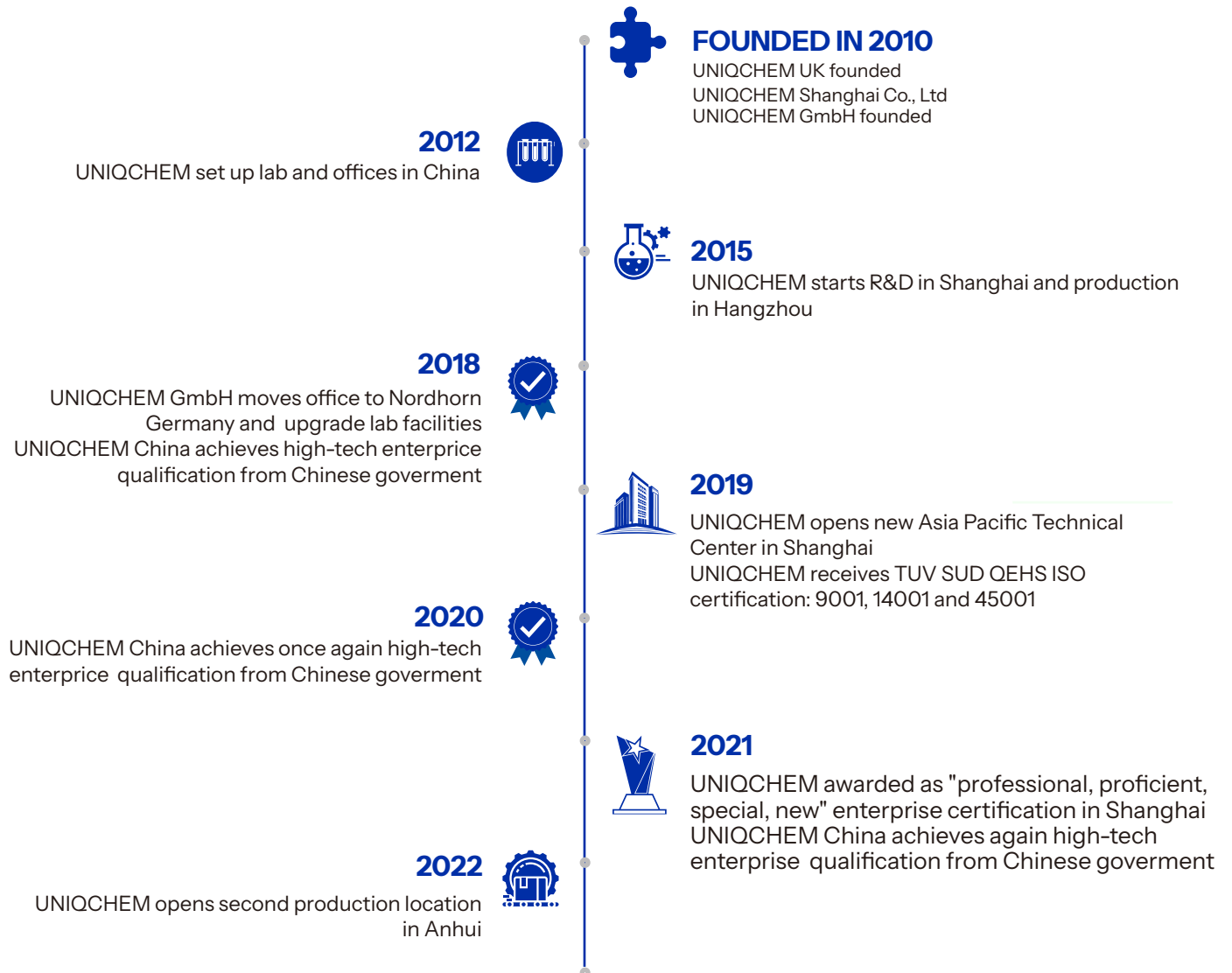
We want to be your solution partner in specialty additives by strengthening your market position through technology and service, therefore our slogan is 'Customized Solutions':

- 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.

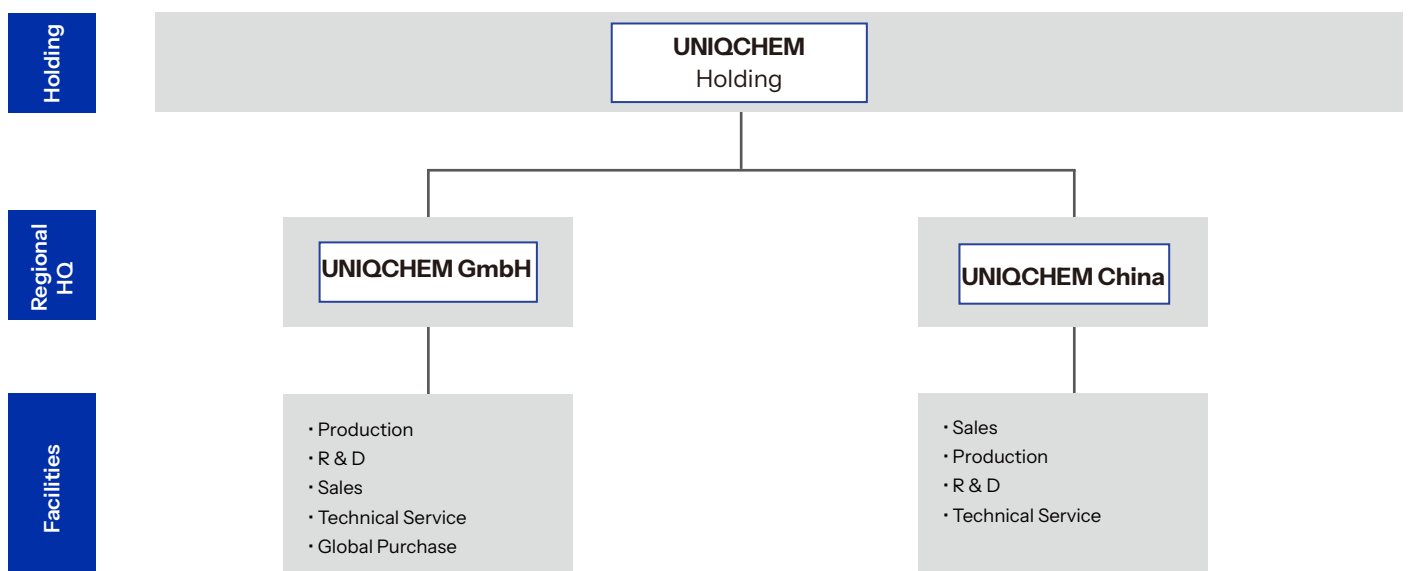
Our goal is to be the fastest growing and most competitive supplier of specialty additives in this market by offering the best service, supply and samples by our communication, corporation and commitment to you.



# Our History



# Company structure







## Product lines and nomenclature

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

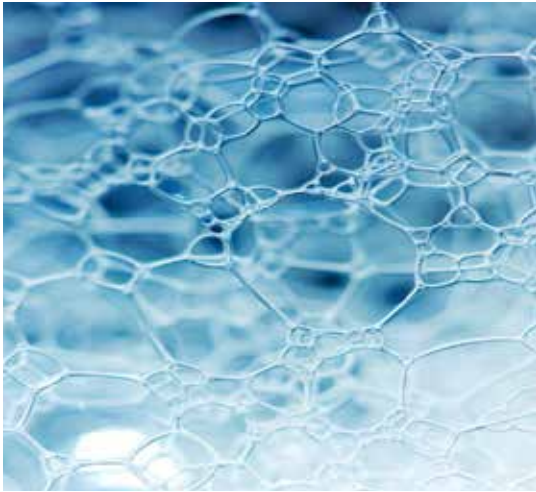


S = Solvent based  
W = Water borne  
U = Universal



**Additives for  
Paint  
and  
Coatings**

|                                      | DOSAGE<br>% | PROPERTIES / APPLICATION  | WATER<br>BASED | SOLVENT<br>BASED | SOLVENT<br>FREE |
|--------------------------------------|-------------|---|----------------|------------------|-----------------|
| <b>Non silicone defoamers</b>        |             |   |                |                  |                 |
| UNIQ®FOAM 120 S                      | 0.1-1.0     | Strong defoamer preventing formation of foam during manufacturing and filling. Works well against macro foam, can cause haze in glossy clear coatings.        |                | ■                |                 |
| UNIQ®FOAM 130 S                      | 0.1-1.0     | Strong defoamer showing superior de-aerating effects, very suitable for UPE, heavy duty, refinish, coil and clear coating.                                    |                | ■                |                 |
| UNIQ®FOAM 131 S                      | 0.1-1.0     | Strong defoamer, gives good air-release and macro defoaming properties. very suitable for pigment coating and spraying applications.                          |                | ■                |                 |
| UNIQ®FOAM 132 S                      | 0.1-1.0     | Strong defoamer working against micro- and macro-foam, very suitable for clear coating, strong against pinholing and popping in 2C PU , high clarity.         |                | ■                |                 |
| UNIQ®FOAM 150 S                      | 0.1-1.0     | is a strong defoamer especially suitable for solvent free epoxy, solvent free PU and UV system. 100% version of 132S  |                | ■                | ■               |
| UNIQ®FOAM 152 S                      | 0.1-1.0     | Suitable for solvent free epoxy, solvent free PU and UV system. Good working against micro- and macro-foam, improves leveling                                 |                | ■                | ■               |
| UNIQ®FOAM 155 S                      | 0.1-1.0     | Suitable for solvent free systems with rapid deaeration and defoaming, promotes leveling. May cause haze in clear coats.                                      |                | ■                | ■               |
| UNIQ®FOAM 158 S                      | 0.1-1.0     | Suitable for solvent- and solvent free and UV systems with excellent compatibility, suited for pigment and clear coatings.                                    |                | ■                | ■               |
| UNIQ®FOAM 170 S                      | 0.1-1.0     | Suited for UPE, HS coatings like epoxy and 2K PU  |                | ■                | ■               |
| UNIQ®FOAM 175 S                      | 0.1-1.0     | Suited for OPV, UV and high gloss coatings systems  |                | ■                |                 |
| UNIQ®FOAM 180 W                      | 0.3-3.0     | Prevents surface defects and improves levelling avoiding pinholing and popping  | ■              |                  |                 |
| UNIQ®FOAM 182 W                      | 0.3-3.0     | Prevents surface defects and improves levelling avoiding pinholing and popping  | ■              |                  |                 |
| UNIQ®FOAM LP2507                     | 0.1-1.0     | Suited for WB systems and pigment concentrates, working strong against macro-foam   | ■              |                  |                 |
| UNIQ®FOAM LP2537                     | 0.3-1.0     | Mineral oil based emulsified WB decorative coatings defoamer, silicone free   | ■              |                  |                 |
| UNIQ®FOAM LP2599                     | 0.1-1.0     | Mineral oil free defoamer for decorative- and industrial market. Low dosage requirement, strong working   | ■              |                  |                 |
| <b>Silicone containing defoamers</b> |             |   |                |                  |                 |
| UNIQ®FOAM 235 S                      | 0.1-0.6     | All round defoamer for spray, rolling, brushing and curtain coatings  |                | ■                |                 |
| UNIQ®FOAM 238 S                      | 0.1-0.7     | Suited for top coating, clear coats, excellent compatibility  |                | ■                |                 |
| UNIQ®FOAM 246 S                      | 0.1-0.6     | All round defoamer for spray, rolling, brushing and curtain coatings, with strong micro-foam destroying properties.   |                | ■                |                 |
| UNIQ®FOAM 272 S                      | 0.1-1.0     | Suited for HS epoxy and 2K PU coating system  |                | ■                | ■               |
| UNIQ®FOAM 280 W                      | 0.1-1.0     | Defoamer for high gloss coating, excellent compatibility  | ■              |                  |                 |
| UNIQ®FOAM 290 W                      | 0.1-1.0     | Strong defoamer for grinding processes and topcoats, excellent compatibility  | ■              |                  |                 |
| UNIQ®FOAM 292 W                      | 0.1-1.0     | Suited for grinding and post addition topcoats, elimination micro- and macro foam   | ■              |                  |                 |
| UNIQ®FOAM 295 W                      | 0.1-1.0     | Strong high shear stable defoamer for grinding processes, strong working vs micro-foam  | ■              |                  |                 |
| UNIQ®FOAM LP2500                     | 0.1-1.0     | clear transparent silicone defoamer, strong high shear stable defoamer for grinding processes and high shear applications and high shear force application    | ■              |                  |                 |
| UNIQ®FOAM LP2510                     | 0.1-1.0     | Economical silicone containing WB defoamer for architectural applications   | ■              |                  |                 |
| UNIQ®FOAM LP2560                     | 0.1-1.0     | Strong emulsified defoamer for topcoats, clearcoats, airless and airmix spraying applications, very well suited for wb ink applications. Easy to incorporate. | ■              |                  |                 |

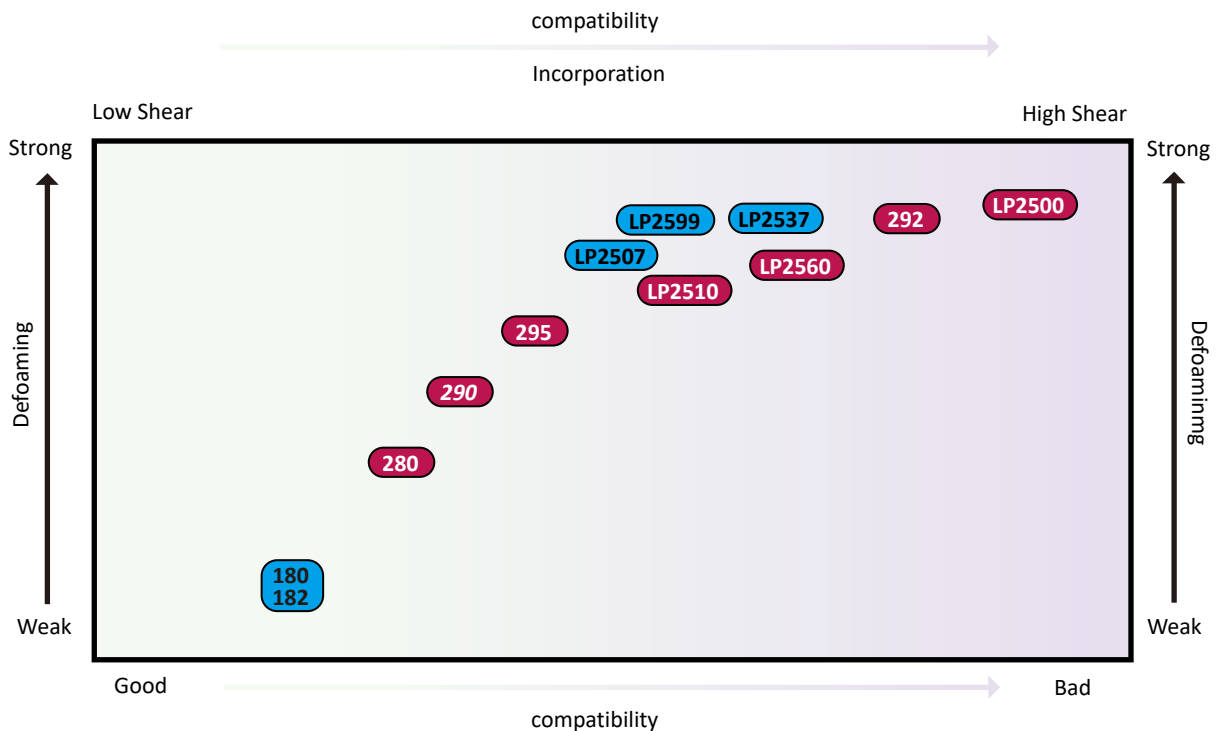
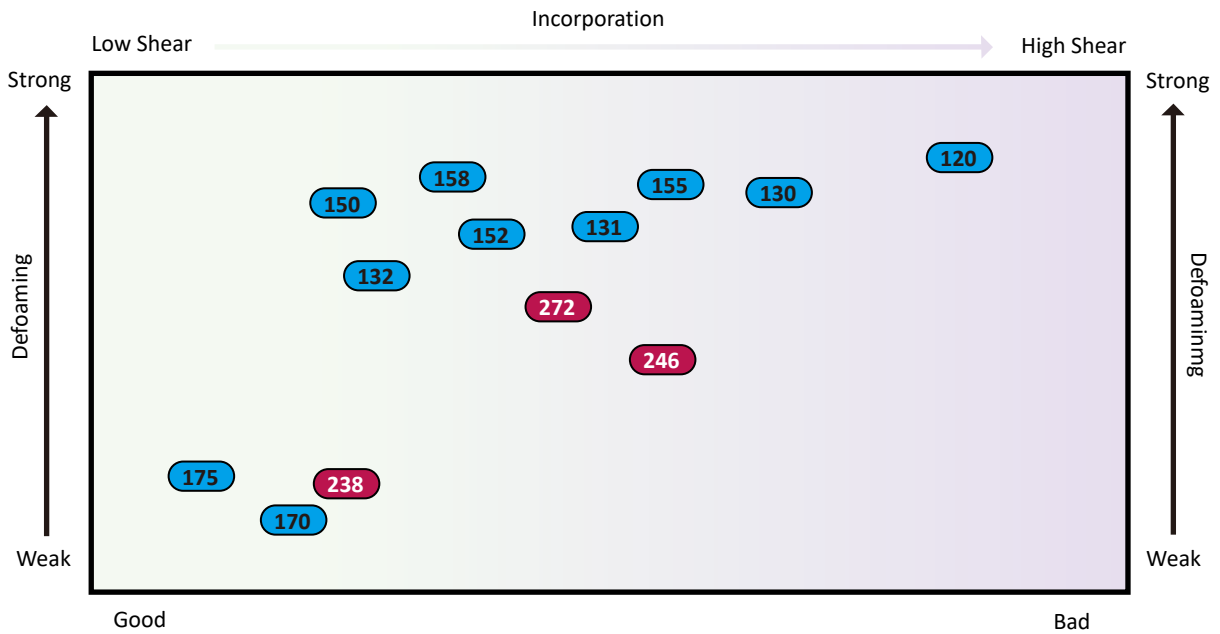
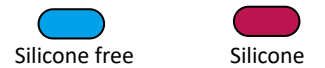


In industrial processes, foam can cause serious problems like:

- 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®FOAM**.

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.



|  | ACTIVE CONTENT | DOSAGE % | PROPERTIES / APPLICATION  | WATER BASED | SOLVENT BASED | SOLVENT FREE |
|--|----------------|----------|---|-------------|---------------|--------------|
| <b>Non silicone wetting and leveling agents</b>        |                |          |   |             |               |              |
| UNIQ®FLOW 350 W  | 100            | 0.1-1.0  | Excellent wetting, anti-crater and leveling agent with defoaming properties Fluor containing  | ■           | ■             | ■            |
| UNIQ®FLOW 352 W  | 100            | 0.1-1.0  | Silicone free and fluorine free wetting and leveling additives with strong defoaming properties. Gives strong surface tension reduction properties. | ■           |               |              |
| UNIQ®FLOW 361 S  | 100            | 0.05-0.5 | Anti-crater and wetting for high gloss coating, causing no haze. Excellent wetting on sharp corners avoiding fat-edge. Fluor containing             |             | ■             | ■            |
| UNIQ®FLOW 372 S  | 60             | 0.1-1.0  | All round levelling agent, more polar, no haze in clear. Fluor containing   | ■           | ■             | ■            |
| UNIQ®FLOW 375 S  | 70             | 0.1-1.0  | All round levelling agent with defoaming performances. Fluor containing   |             | ■             |              |
| UNIQ®FLOW 376 S  | 70             | 0.1-1.0  | Suitable for high gloss clear and pigmented coating, fast leveling and high clarity improves DOI. Fluor containing                                  |             | ■             |              |
| UNIQ®FLOW 380 S  | 100            | 0.1-1.0  | Acrylate leveling agent with some deaeration properties   |             | ■             | ■            |
| UNIQ®FLOW 384 S  | 100            | 0.1-1.0  | Acrylate leveling agent with strong deaeration/air-release performances   |             | ■             | ■            |
| UNIQ®FLOW 386 S  | 50             | 0.1-1.0  | Acrylate leveling agent with good compatibility and leveling suited for all solvent based applications including clear coats                        |             | ■             |              |
| UNIQ®FLOW 387U   | 100            | 0.1-1.0  | Especially suited for increasing surface energy to improve the interlayer adhesion. Excellent compatibility.  | ■           | ■             | ■            |
| UNIQ®FLOW 389 S  | 100            | 0.1-1.0  | 100% version of 386S  |             | ■             | ■            |
| UNIQ®FLOW 390 S  | 100            | 0.1-1.0  | Cost effective acrylate leveling agent, well suited for baking systems, excellent heat stability, showing defoaming properties                      |             | ■             |              |
| UNIQ®FLOW 392 S  | 50             | 0.1-1.0  | Leveling agent with anti popping and deaeration properties suited for clear and pigmented systems   |             | ■             |              |
| UNIQ®FLOW 393 S  | 50             | 0.1-1.5  | polyester based with excellent compatibility, improved DOI, shows defoaming properties  |             | ■             |              |
| <b>Silicone containing wetting and leveling agents</b> |                |          |   |             |               |              |
| UNIQ®FLOW 400 U  | 50             | 0.1-1.0  | All round silicone leveling agent   | ■           | ■             |              |
| UNIQ®FLOW 415 S  | 15             | 0.1-1.0  | Very suited to improve short wave leveling with good slip performance. Helps avoiding Bernard cell formation.                                       |             | ■             |              |
| UNIQ®FLOW 430 S  | 100            | 0.1-1.0  | Levelling agent with strong air-release properties  |             | ■             | ■            |
| UNIQ®FLOW 437 S  | NA             | 1.0-5.0  | Prevent pinholes, needles, blisters   |             | ■             |              |
| UNIQ®FLOW 440 U  | 50             | 0.1-0.3  | Anti-crater and high slip, fast wetting and leveling  | ■           | ■             |              |
| 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 fast wetting and leveling, increases slip and very suitable for UV coating and OPV.  | ■           | ■             | ■            |
| UNIQ®FLOW 483 U  | 100            | 0.1-1.0  | Excellent substrate wetting and anti-crater performance, very low foam stabilization  | ■           | ■             | ■            |
| UNIQ®FLOW 487 U  | 100            | 0.1-1.0  | Surface tension reduction, anti-crater and low foam, no influence on recoatability  | ■           |               | ■            |
| UNIQ®FLOW 488 U  | 100            | 0.1-1.0  | Strong surface tension reduction and excellent wetting properties, good compatibility, no influence on recoatability                                | ■           |               | ■            |
| UNIQ®FLOW 493 U  | 100            | 0.1-1.0  | Fast leveling, excellent compatibility levelling, high slip with good handfeeling   | ■           | ■             | ■            |
| UNIQ®FLOW 495 U  | 100            | 0.1-1.0  | Silicone leveling agent, fast leveling and high slip with excellent handfeeling, shows some defoaming properties.                                   | ■           | ■             | ■            |
| UNIQ®FLOW 498 U  | 100            | 0.1-1.0  | Improves slip, excellent anti-blocking properties, excellent leveling, low foam and improves gloss  | ■           | ■             | ■            |
| UNIQ®FLOW 499 U  | 100            | 0.2-3.0  | Anti-graffitiy resistance additive after crosslinking   | ■           | ■             | ■            |





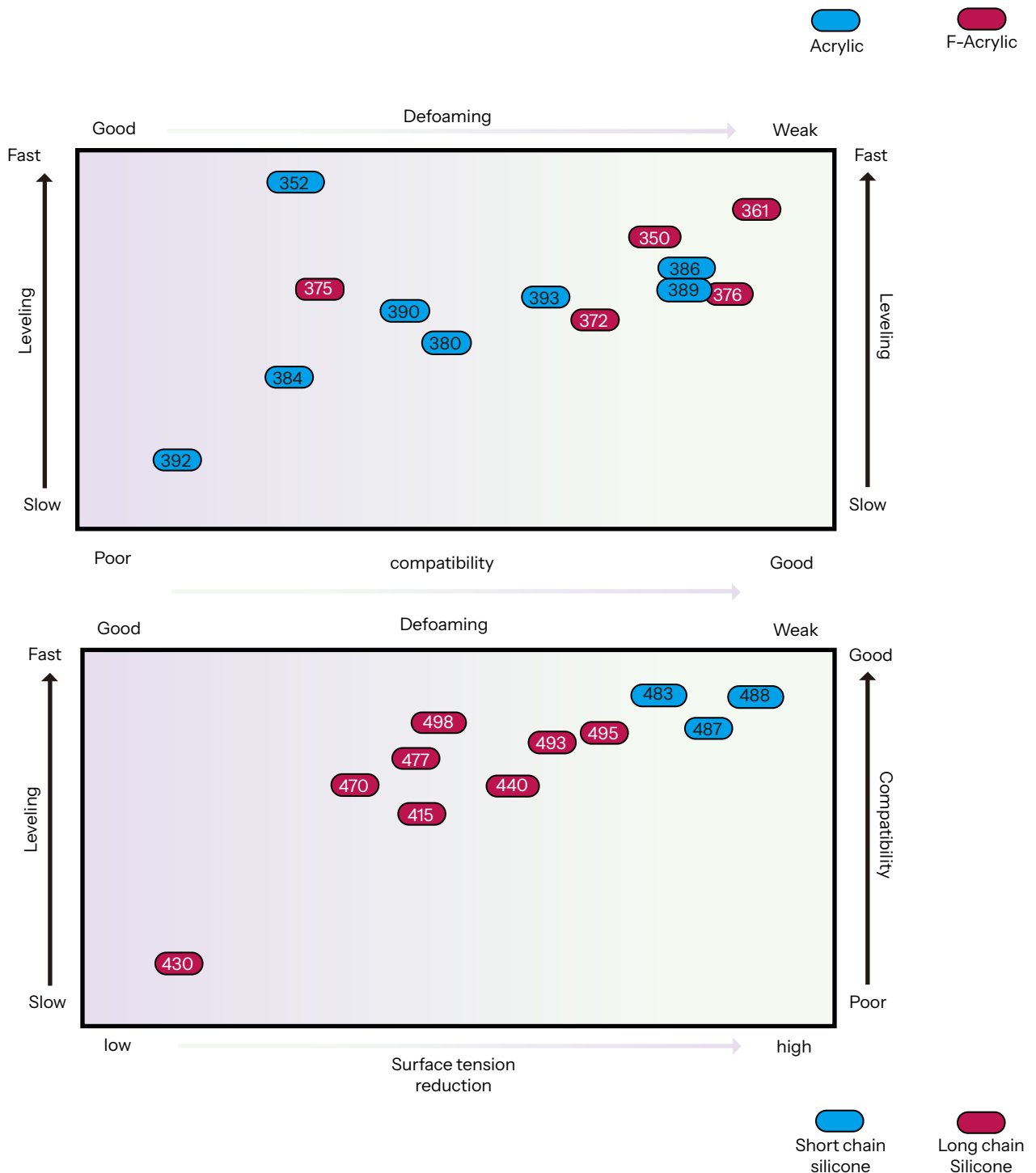
Flow and leveling agents playing a very important role for the superior appearances of your coating.

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<sup>®</sup>FLOW**.



|  | SOLD CONTENT | AMINE VALUE | ACID VALUE | PROPERTIES / APPLICATION  | WATER BASED | SOLVENT BASED | SOLVENT FREE |
|--|--------------|-------------|------------|---|-------------|---------------|--------------|
| <b>High molecular weight dispersing agents</b> |              |             |            |   |             |               |              |
| UNIQ® SPERSE 510 S                             | 50           | 6           | 14         | Suited for TiO <sub>2</sub> , inorganic pigments and matting agents, well accepted in wood- and general industrial coatings                                     |             | ■             |              |
| UNIQ® SPERSE 550 S                             | 45           | 14          |            | General Industrial coatings, organic and inorganic pigments, suited for resin minimal pigment concentrates  |             | ■             |              |
| UNIQ® SPERSE 553 S                             | 45           | 14          |            | Suited for all pigments, preparation of Resin minimal pigment concentrates. Reduces viscosity and avoid flooding and floating                                   |             | ■             |              |
| UNIQ® SPERSE 560 S                             | 30           | 8           |            | Dispersant for high performance requirements in industrial- and refinish coatings   |             | ■             |              |
| UNIQ® SPERSE 580 U                             | 100          | 52          |            | High performance dispersant for difficult pigments. Gives excellent jetness with blue undertone for HCC black pigments.   | ■           | ■             | ■            |
| UNIQ® SPERSE 586 U                             | 100          | 45          | 3          | Allround dispersant for organic and inorganic pigments showing excellent salt spray resistance  | ■           | ■             | ■            |
| UNIQ® SPERSE 590 U                             | 100          | 27          | 27         | Suited for organic and inorganic pigments, excellent compatibility and dispersebility transparent iron oxides   | ■           | ■             | ■            |
| UNIQ® SPERSE 605 S                             | 40           | 19          | 8          | High performance dispersant for industrial- and refinish coatings suited for all pigments   |             | ■             |              |
| UNIQ® SPERSE 615 S                             | 40           | 19          | 8          | High performance dispersant for industrial- and refinish coatings suited for all pigments   |             | ■             |              |
| UNIQ® SPERSE 618 S                             | 40           | 23          |            | High performance dispersant for industrial- and refinish coatings suited for all pigments with strong viscosity reduction, compatible in CAB gives high jetness |             | ■             |              |
| UNIQ® SPERSE 630 U                             | 100          | 40          |            | Mainly suited for HPP organic pigments, showing excellent transparency and chroma   | ■           | ■             | ■            |
| UNIQ® SPERSE 650 U                             | 100          |             | 14         | Mainly suited for inorganic pigments and matting agents   | ■           | ■             | ■            |
| UNIQ® SPERSE 670 U                             | 100          | 70          | 42         | Dispersing agents for transparent iron oxide, matting agents, inorganic pigments  | ■           | ■             | ■            |
| UNIQ® SPERSE 680 U                             | 100          | 65          | 9          | High performance universal dispersant for all applications. Suited for all pigments, giving excellent jetness and viscosity reduction                           | ■           | ■             | ■            |
| UNIQ® SPERSE 685 U                             | 100          |             | 12         | Industrial application, epoxy flooring, avoids color floatations, gel coats   | ■           | ■             | ■            |
| UNIQ® SPERSE 686 S                             | 100          | 57          | 11         | High performance universal dispersant suited for all pigments. Gives excellent jetness and color development for organic pigments. CAB compatible.              |             | ■             | ■            |
| UNIQ® SPERSE 688 W                             | 35           | 22          |            | Suited for resin free pigment concentrates for all kind of pigments with excellent water resistance   | ■           |               |              |
| UNIQ® SPERSE 690 W                             | 40           | 15          | 15         | Suited for organic and inorganic pigments, excellent compatibility.   | ■           |               |              |
| UNIQ® SPERSE 692 W                             | 40           | 20          | 20         | Suited for all pigments, excellent compatibility and dispersebility including transparent iron oxides   | ■           |               |              |
| <b>Low molecular weight dispersing agents</b>  |              |             |            |   |             |               |              |
| UNIQ® SPERSE 710 S                             | 50           |             | 80         | Excellent for TiO <sub>2</sub> , fillers and extenders, low viscosities   |             | ■             |              |
| UNIQ® SPERSE 711 S                             | 100          |             | 140        | 100% version of 710S  |             | ■             | ■            |
| UNIQ® SPERSE 715 S                             | 100          |             | 105        | Excellent for TiO <sub>2</sub> , fillers and extenders, low viscosities, economical version of 711S   |             | ■             | ■            |
| UNIQ® SPERSE 716 S                             | 50           |             | 68         | Excellent for TiO <sub>2</sub> , fillers and extenders, low viscosities, economical version of 710S   |             | ■             |              |
| UNIQ® SPERSE 730 U                             | 100          |             | 60         | Universal dispersant for TiO <sub>2</sub> , extenders and fillers, strong viscosity reduction   | ■           | ■             | ■            |
| UNIQ® SPERSE 740 U                             | 100          | 60          | 33         | 100% version of 745S  |             | ■             | ■            |
| UNIQ® SPERSE 745 S                             | 50           | 20          | 35         | improve the pigment wetting, especially for extenders and inorganic pigments and activation of organically Bentonites, suited for co-grinding.                  |             | ■             |              |
| UNIQ® SPERSE 764 S                             | 50           |             | 140        | Anti flooding dispersant and suited for inorganic pigments  |             | ■             | ■            |
| UNIQ® SPERSE 765 S                             | 50           |             | 125        | Anti flooding dispersant with silicone. gives metallic orientation in base coats.   |             | ■             | ■            |
| UNIQ® SPERSE 770 U                             | 100          | 88          |            | Dispersant for all kind of pigments, usage at low dosage, especially suited for alkyds systems and co-grinding process  | □           | ■             | ■            |
| UNIQ® SPERSE 780 U                             | 100          | 69          | 92         | Suited for stabilisation of TiO <sub>2</sub> , fillers and extenders pigments, strong viscosity reduction and gives excellent gloss.                            | ■           | ■             | ■            |
| UNIQ® SPERSE FA 625                            | 100          | 48          | 48         | Suited for all kind of pigments especially for decorative coatings for universal colorants including compatibility for LOA. Gives colour acceptance by post-add | ■           | ■             | ■            |
| UNIQ® SPERSE LP4540A                           | 40           |             |            | Excellent dispersing agent for grinding fillers and TiO <sub>2</sub> for decorative, ammonia neutralised  | ■           |               |              |
| UNIQ® SPERSE LP4540N                           | 40           |             |            | Excellent dispersing agent for grinding fillers and TiO <sub>2</sub> for decorative, sodium neutralised   | ■           |               |              |
| UNIQ® SPERSE LP4534                            | 30           |             |            | Hydrophobic dispersing agent for grinding fillers and TiO <sub>2</sub> for decorative, improved scrub resistance  | ■           |               |              |
| UNIQ® SPERSE LP4544                            | 40           |             |            | Hydrophobic dispersing agent for grinding fillers and TiO <sub>2</sub> for decorative, improved scrub and tint stability  | ■           |               |              |



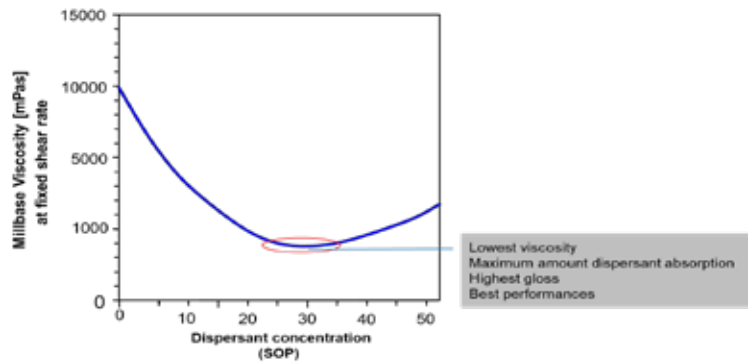
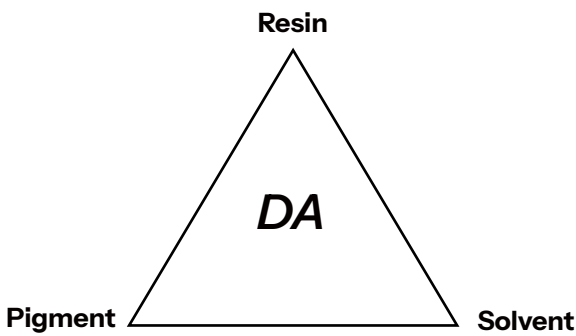
Dispersing agents playing a very important role for the wetting and stabilization of pigments.

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. Then 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<sup>®</sup> 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 agent on pigment is required.



$$\text{Solid dispersant on Pigment (SOP)} = \frac{\text{surface area (BET)}}{4 - 5}$$

|               | Inorganic Pigments    | Organic Pigments     | HPP organic pigments<br>HCC black pigments |
|---------------|-----------------------|----------------------|--|
| Solvent-based |                       | 680 U / 686 S / 586U | 580U                                       |
|               |                       | 605S / 615S          |  |
|               |                       | 560S / 563S          |  |
|               |                       | 550S / 553S          |  |
|               |                       | 510S / 650U          |  |
| Solvent-free  | 716S / 780U           |                      |  |
|               |                       | 680U / P-135         | P-134 / 680U                               |
|               | 730U / P-193 / P-195  | 685U                 |  |
| Water Based   |                       |                      | 580U                                       |
|               |                       | 630U / 586U          |  |
|               |                       | 680U / 590U          |  |
|               |                       | 690W / 692W          |  |
|               |                       | 685U                 |  |
|               | 730U / 780U           |                      |  |
|               | LP4540A               |                      |  |
|               | LP4540N/LP4534/LP4544 |                      |  |
|               | Decorative            | Industrial           | Automotive                                 |



# UNIQ<sup>®</sup> VIS

UNIQ<sup>®</sup> VIS is our brand for some special products, like rheology control agents and conductivity agents.

|                                 | CHEMISTRY            | DOSAGE % | PROPERTIES / APPLICATION  | WATER BASED | SOLVENT BASED |
|---------------------------------|----------------------|----------|---|-------------|---------------|
| <b>Rheology and specialties</b> |                      |          |   |             |               |
| UNIQ <sup>®</sup> VIS 810 S     | Polyurea             | 0.1-2.0  | Urea thickener for low polar to medium polar area                             |             | ■             |
| UNIQ <sup>®</sup> VIS 817 S     | rheology agent       | 20-30    | Rheology modifier to activate hydrophilic fumed silica                        |             | ■             |
| UNIQ <sup>®</sup> VIS 820 W     | Polyurea             | 0.1-2.0  | Urea thickener for medium polar to high polar area                            | ■           |               |
| UNIQ <sup>®</sup> VIS 840 W     | Modified urea        | 3.0-10.0 | Prevent drying out of pigment paste   | ■           |               |
| UNIQ <sup>®</sup> VIS LP8048    | Polyurea             | 0.1-2.0  | Urea thickener for medium polar to high polar area. NMP free                  | ■           |               |
| UNIQ <sup>®</sup> VIS LP8050    | Polyurea             | 0.1-2.0  | Urea thickener for Low polar to polar area, NMP free                          |             | ■             |
| UNIQ <sup>®</sup> VIS 886 S     | Alkylolammonium salt | 0.1-2.0  | Increase the Conductivity of Electrostatically Sprayed Solvent-based Coatings |             | ■             |



UNIQ<sup>®</sup> 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

|                             | CHEMISTRY     | DOSAGE % | PROPERTIES / APPLICATION     | WATER BASED | SOLVENT BASED |
|-----------------------------|---------------|----------|------------------------------|-------------|---------------|
| <b>Light Stabilizers</b>    |               |          |                              |             |               |
| UNIQ <sup>®</sup> LIGHT 923 | HALS          | 0.5-3.0  | Acid system HALS             |             | ■             |
| UNIQ <sup>®</sup> LIGHT 930 | Benzotriazole | 1.0-3.0  | Common used UV absorber      | □           | ■             |
| UNIQ <sup>®</sup> LIGHT 940 | triazine      | 1.0-3.0  | High performance UV absorber | □           | ■             |
| UNIQ <sup>®</sup> LIGHT 951 | Blend         | 1.0-5.0  | Blend light stabilizer       |             | ■             |
| UNIQ <sup>®</sup> LIGHT 960 | Blend         | 1.0-3.0  | Blend light stabilizer       |             | ■             |
| UNIQ <sup>®</sup> LIGHT 984 | Benzotriazole | 1.0-3.0  | UV absorber for automotive   |             | ■             |
| UNIQ <sup>®</sup> LIGHT 992 | HALS          | 0.5-3.0  | Common used HALS             | □           | ■             |





# Additives for Ink and Inkjet



# UNIQ<sup>®</sup> SPERSE

# UNIQ<sup>®</sup> JET

|                               | SOLD CONTENT | AMINE VALUE | ACID VALUE | PROPERTIES / APPLICATION   | WATER BASED | SOLVENT BASED | UV |
|-------------------------------|--------------|-------------|------------|--|-------------|---------------|----|
| <b>Dispersing Agents</b>      |              |             |            |  |             |               |    |
| UNIQ <sup>®</sup> SPERSE 9012 | 40           | 16          | 9          | Suitable for all the pigments, can be used for pigment concentrates  | ■           |               | ■  |
| UNIQ <sup>®</sup> SPERSE 9330 | 100          |             | 60         | TiO <sub>2</sub> and inorganic pigments dispersion, excellent in viscosity reduction   | ■           | ■             | ■  |
| UNIQ <sup>®</sup> SPERSE 9335 | 35           | 17          |            | Suitable for all the pigments, can be used for pigment concentrates, excellent transparency and density  | ■           |               |    |
| UNIQ <sup>®</sup> SPERSE 9350 | 45           | 14          |            | Good compatibility with resins and solvents. Suitable for all pigments dispersion  |             | ■             |    |
| UNIQ <sup>®</sup> SPERSE 9370 | 100          | 80          |            | Excellent wetting and dispersing agent compatibility with resins and solvents in high polar area like in alcohols. Suitable for all pigments dispersion                                |             | ■             |    |
| UNIQ <sup>®</sup> SPERSE 9380 | 100          | 65          | 10         | Excellent dispersant for all pigments suited for all kind of ink and digital ink   | ■           | ■             | ■  |
| UNIQ <sup>®</sup> SPERSE 9450 | 100          | 3           | 14         | Suitable for universal tinters for all pigments dispersion. Especially good in TiO <sub>2</sub> and inorganic pigments dispersion with good sedimentation and anti-floating properties | ■           | ■             |    |

|                            | SOLD CONTENT | AMINE VALUE | ACID VALUE | PROPERTIES / APPLICATION   | WATER BASED | SOLVENT BASED | UV |
|----------------------------|--------------|-------------|------------|--|-------------|---------------|----|
| <b>Dispersing Agents</b>   |              |             |            |  |             |               |    |
| UNIQ <sup>®</sup> JET 9053 | 100          |             | 12         | Suitable for universal tinters for all pigments dispersion. Especially good in TiO <sub>2</sub> and inorganic pigments dispersion with good sedimentation and anti-floating properties | ■           | ■             | ■  |
| UNIQ <sup>®</sup> JET 9506 | 30           | 8           |            | Good color developing for most of the organic pigments, improved viscosity, gloss and color strength   |             | ■             |    |
| UNIQ <sup>®</sup> JET 9510 | 100          | 17          |            | Organic and inorganic pigments dispersion, excellent for jetness improvement of carbon black   |             | ■             | ■  |
| UNIQ <sup>®</sup> JET 9520 | 100          | 12          |            | Suitable for all pigments dispersion in solvent borne and UV system  |             | ■             | ■  |
| UNIQ <sup>®</sup> JET 9528 | 100          | 53          | 16         | Excellent color developing for most of the organic pigments, low viscosity, gloss, color strength and stability, CAB compatible  |             | ■             | ■  |
| UNIQ <sup>®</sup> JET 9529 | 100          | 48          | 10         | Excellent color developing for most of the organic pigments, low viscosity, gloss, color strength and stability, CAB compatible  |             | ■             | ■  |
| UNIQ <sup>®</sup> JET 9550 | 100          | 75          | 11         | Excellent color developing for several organic pigments, low viscosity, gloss, color strength and stability  | ■           | ■             | ■  |
| UNIQ <sup>®</sup> JET 9560 | 100          | 50          |            | Excellent color developing for most of the organic pigments, low viscosity, gloss, color strength and stability  | ■           | ■             | ■  |

# Gravure ink

| Aromatics<br>Toluene | Aromatics/Ketone<br>Toluene / MEK | Ketone/Esters<br>MEK / EA  | Esters/Alcohol<br>EA / IPA (EtOH) | Alcohol<br>IPA (Et/OH) |
|----------------------|-----------------------------------|--|-----------------------------------|------------------------|
|                      |                                   | <b>Organic pigments</b>  |                                   |                        |
| UNIQ® SPERSE 605S    |                                   | UNIQ® SPERSE 9380<br>UNIQ® SPERSE 9506<br>UNIQ® SPERSE 770U                      | UNIQ® JET 9560                    |                        |
|                      |                                   | <b>Inorganic pigments</b>  |                                   |                        |
|                      |                                   | UNIQ® SPERSE 716S<br>UNIQ® SPERSE 730U<br>UNIQ® SPERSE 770U<br>UNIQ® SPERSE 780U |                                   |                        |

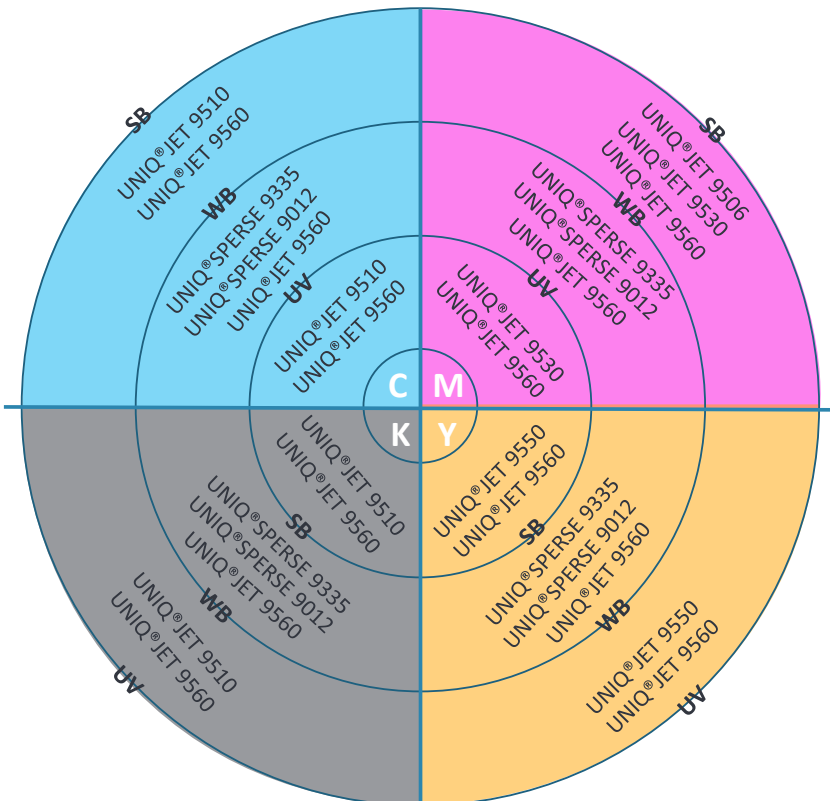
# Flexographic ink


| Solvent based   | Water based  |
|---|--|
| UNIQ® JET 9053<br>UNIQ® SPERSE 9380<br>UNIQ® SPERSE 770U<br>UNIQ® SPERSE 730U | UNIQ® SPERSE 9012<br>UNIQ® SPERSE 9380<br>UNIQ® SPERSE 9335<br>UNIQ® SPERSE 730U |

# UV Offset ink

| UV  |
|---|
| UNIQ® JET 9528<br>UNIQ® JET 9560<br>UNIQ® SPERSE P-193<br>UNIQ® SPERSE 730U |

# Inkjet SB, UV and WB





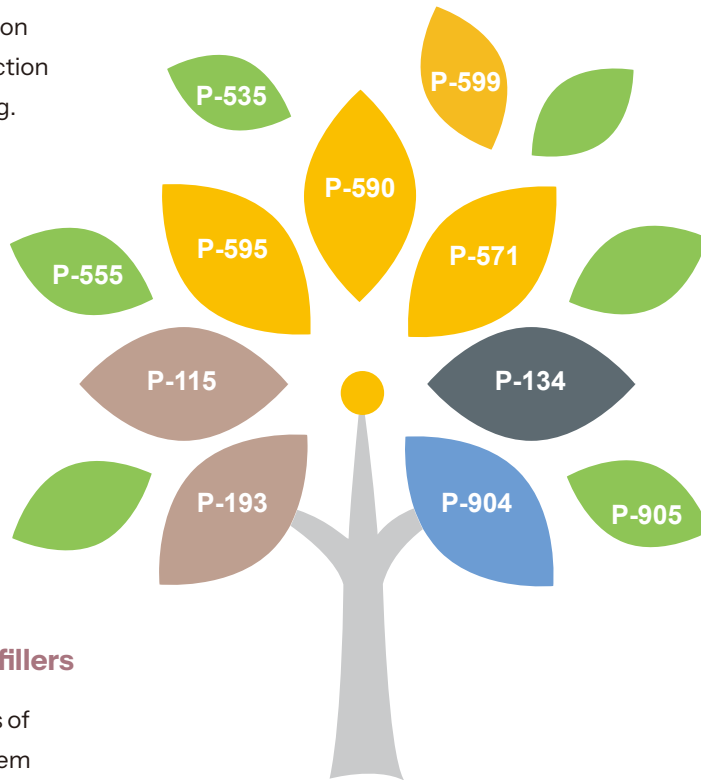
**Additives for  
Composites,  
SMC/BMC,  
Ambient curing  
systems and  
PVC plastisols**



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.

### Defoaming

Excellent defoamers for solvent-free epoxy system can reduce the generation of bubbles in the production process and help leveling.



### W&D additives for pigments

Deflocculating wetting dispersant can effectively prevent titanium dioxide and organic pigment from floating and flooding.

### W&D additives for fillers

Dispersants for all kinds of fillers in high filling system can effectively reduce the viscosity and increase the loading capacity of fillers.

### Thixotropic synergism

The thixotropic synergist with fumed silica can be easily added into resins and curing agents.

## Defoamers for floor coatings



P-571



COMP

Dosage total formulation: 0,5%

|                            | PRODUCT TYPE                         | INDUSTRIE   | SYSTEMS                                   | FILLER TYPE   | PROPERTIES  |
|----------------------------|--------------------------------------|---|---|---|---|
| <b>UNIQ® SPERSE P-115</b>  | Dispersant                           | Molding/pultrusion/<br>UPR/Adhesives/<br>Sealants/potting | UPR/Vinyl                                 | CaCO <sub>3</sub> /ATH  | Wetting and dispersing agent for filler material with strong viscosity reduction.   |
| <b>UNIQ® SPERSE P-172</b>  | Phase separation prevention additive | SMC   | UPR/Vinyl                                 | /   | Effectively prevents phase separation of resin components from polystyrene  |
| <b>UNIQ® SPERSE P-134</b>  | Dispersant                           | Liquid colorants  | Plasticizers / PU                         | Organic pigments/<br>Carbon black   | Excellent wetting and dispersing agent for organic- and carbon black pigments, strong viscosity reduction and excellent color development |
| <b>UNIQ® SPERSE P-120</b>  | Dispersant                           | Epoxy/ UPR/ PU/ PVC                                       | Gelcoats/putty/<br>Epoxy/PU               | inorganic pigments/<br>fillers/CaCO <sub>3</sub> /ATH   | Wetting and dispersing agent for fillers, strong viscosity reduction  |
| <b>UNIQ® SPERSE P-141</b>  | Dispersant                           | UPR   | UPR/Vinyl                                 | CaCO <sub>3</sub>   | Wetting and dispersing agent for fillers, strong viscosity reduction  |
| <b>UNIQ® SPERSE P-144</b>  | Dispersant                           | UPR   | UPR/Vinyl/<br>Epoxy                       | CaCO <sub>3</sub> /ATH  | Wetting and dispersing agent for fillers, strong viscosity reduction  |
| <b>UNIQ® SPERSE P-193</b>  | Dispersant                           | 100   | SMC/<br>Adhesives/<br>Sealants            | CaCO <sub>3</sub> /ATH/Ca(OH) <sub>2</sub> ,<br>fumed silica/ SiO <sub>2</sub>                          | Wetting and dispersing agent for filler material with strong viscosity reduction. Also suited for TiO <sub>2</sub>                        |
| <b>UNIQ® SPERSE P-195</b>  | Dispersant                           | 100   | SMC/<br>Adhesives/<br>Sealants            | CaCO <sub>3</sub> /ATH/Ca(OH) <sub>2</sub> ,<br>fumed silica/ SiO <sub>2</sub>                          | Wetting and dispersing agent for filler material with strong viscosity reduction. Also suited for TiO <sub>2</sub>                        |
| <b>UNIQ® SPERSE P-904</b>  | Thixotropic synergist                | Epoxy/UPR/Adhesives/<br>sealants                          | Epoxy/ UPR/<br>Adhesives /<br>Sealant     | Fumed Silica /<br>Bentone   | Thixotropic synergist with fumed silica, strong thixotropic effect  |
| <b>UNIQ® FOAM P-535</b>    | Defoamer                             | PU  | PU  | /   | 100% silicone free , excellent against micro and macro-foam   |
| <b>UNIQ® FOAM P-555</b>    | Defoamer                             | UPR   | UPR                                       | /   | Strong defoamer, silicone free, especially suitable for UPR systems like putty and gelcoats   |
| <b>UNIQ® FOAM P-571</b>    | Defoamer                             | Epoxy/ UPR/ PU/ PVC                                       | Epoxy/ UPR/<br>Adhesives / PU/<br>Sealant | /   | Strong silicone free defoamer for Epoxy flooring and PU flooring, with fast air-release, defoaming and macro-foam destroying properties.  |
| <b>UNIQ® FOAM P-590</b>    | Defoamer                             | PU  | PU adhesives<br>and sealants              | /   | Silicone free 100% defoamer, offering strong ant-foam and macro defoaming properties, suited for fast curing systems                      |
| <b>UNIQ® FOAM P-595</b>    | Defoamer                             | UPR/Epoxy/PU  | UPR/Epoxy/PU                              | /   | Excellent transparency, suited for clear systems  |
| <b>UNIQ® FOAM P-599</b>    | Defoamer                             | UPR/Epoxy/PU  | UPR/Epoxy/PU                              | /   | Excellent transparency, suited for PU, Epoxy and UPR. Helps avoiding pinholing and popping  |
| <b>UNIQ® VIS P-910</b>     | Rheology agent                       | Molding/pultrusion/<br>UPR/adhesives/<br>sealants         | UPR/Epoxy/PU/<br>Vinyl                    | Fumed silica/bentones   | Liquid rheology modifier can provide high thixotropic flow behavior and improve sag- and sedimentation resistance                         |
| <b>UNIQ® VIS P-920</b>     | Rheology agent                       | Molding/pultrusion/<br>UPR/adhesives/<br>sealants         | UPR/Epoxy/PU/<br>Vinyl                    | CaCO <sub>3</sub> /H <sub>3</sub> AlO <sub>3</sub> /Fumed<br>silica/ SiO <sub>2</sub> /TiO <sub>2</sub> | Liquid rheology modifier can provide high thixotropic flow behavior and improve sag- and sedimentation resistance                         |
| <b>UNIQ® FLOW P-990</b>    | Fiber wetting agent                  | Composites/Wind<br>power/pultrusions/<br>winding          | UPR/Epoxy/PU/<br>Vinyl                    | Glass Fiber / Carbon<br>fiber   | Improves wetting of glass- and carbon fibers, reduce bubble entrapment, avoid dry spots and reduce surface defects                        |
| <b>UNIQ® SPERSE P-1450</b> | Internal release agent               | Composites/Wind<br>power/pultrusions/<br>winding          | UPR/Epoxy/PU/<br>Vinyl                    | /   | Multifunctional mold release agent, low migration, no effect on secondary processing and reduce surface defects                           |

# Notes

A large rectangular area with rounded corners, containing 20 horizontal lines for writing notes. The lines are evenly spaced and extend across the width of the page.

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