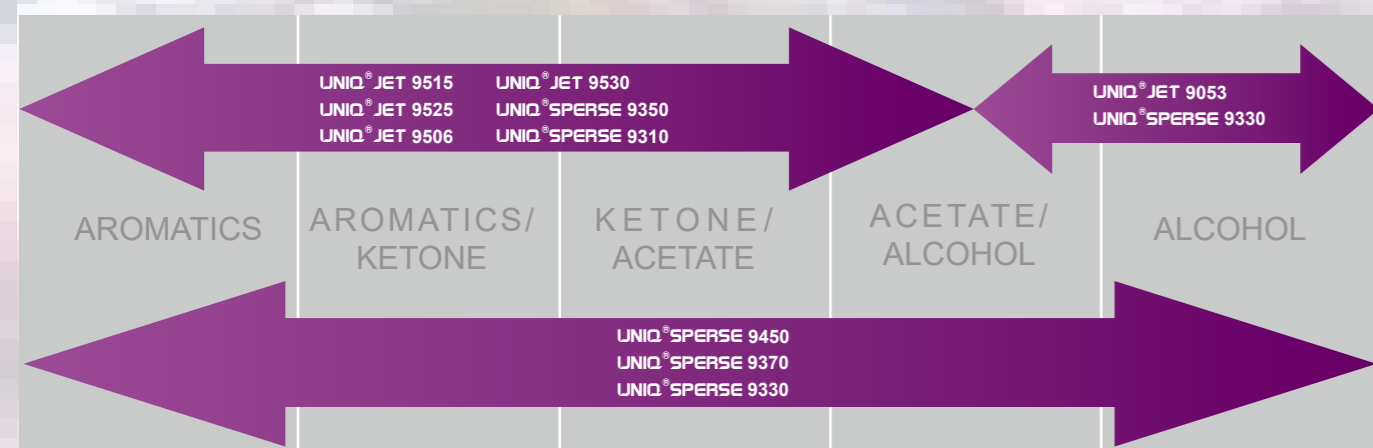


## GRAVURE INK



## OFFSET INK

PRODUCTS	CHEMICAL STRUCTURE	ACTIVE SOLID %	WATER BORNE	SOLVENT BORNE	UV	PERFORMANCE
UNIQ®JET 9510	Polymeric	100		•	•	Suitable for all pigments dispersion in solvent borne and UV system
UNIQ®JET 9520	Polymeric	100		•	•	Organic and inorganic pigments dispersion, excellent for jetness
UNIQ®SPERSE 9312	Polymeric	100		•	•	TiO2 and inorganic pigments dispersion, excellent in viscosity reduction
UNIQ®FLOW 6097	Fluorocarbon Compound	100		•	•	Excellent fast leveling, good substrate wetting, good defoaming and heat stable
UNIQ®FLOW 6344	Modified polyether polysiloxane	100	•	•	•	Good substrate wetting and leveling, improved slip hand feeling

## FLEXOGRAPHIC INK

PRODUCTS	CHEMICAL STRUCTURE	ACTIVE SOLID %	DILUENT	WATER BORNE	SOLVENT BORNE	UV	PERFORMANCE
UNIQ®JET 9053	Polymeric	100		•	•	•	Suitable for universal tinters for all pigments dispersion. Especially good in TiO2 and inorganic pigments dispersion with good sedimentation and anti-floating properties
UNIQ®SPERSE 9450	Polymeric	100	—	•	•	•	Suitable for universal tinters for all pigments dispersion. Especially good in TiO2 and inorganic pigments dispersion with good sedimentation and anti-floating properties
UNIQ®SPERSE 9012	Polymeric	40	WATER	•			Suitable for all the pigments, can be used for pigment concentrates
UNIQ®FOAM 7119	Silicone		—	•			Effective foam release and defoaming property
UNIQ®FOAM 7098	Non Silicone		—	•		•	Anti-foaming and anti-popping in baking system, good leveling
UNIQ®FLOW 6085	Polymeric Fluorocarbon Compound	100	—	•	•	•	Excellent fast leveling, good substrate wetting, good defoaming and heat stable
UNIQ®FLOW 6109	Fluorocarbon Modified Polyacrylate	60	Sec Butanol	•	•	•	Compatible in water borne and solvent borne, helps in leveling and substrate wetting, suitable in high gloss application
UNIQ®FLOW 6135	Organically Modified Polysiloxane	100	—	•	•	•	Excellent substrate wetting, good recoatability
UNIQ®FLOW 6344	Modified polyether polysiloxane	100	—	•	•	•	Good substrate wetting and leveling, improved slip hand feeling

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# Additives for Printing Inks

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## UNIQ<sup>®</sup> SPERSE / UNIQ<sup>®</sup> JET

Dispersing agent plays a very important role for the wetting and stabilization of pigments.

The faster the wetting is taking place, the faster 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 every good viscosity reduction, color strength, reduction in processing time.

These wetting and dispersing agents are offered by **UNIQCHEM** under the brand of **UNIQ<sup>®</sup> SPERSE**

**UNIQ<sup>®</sup> JET** series are specially designed for inkjet application.

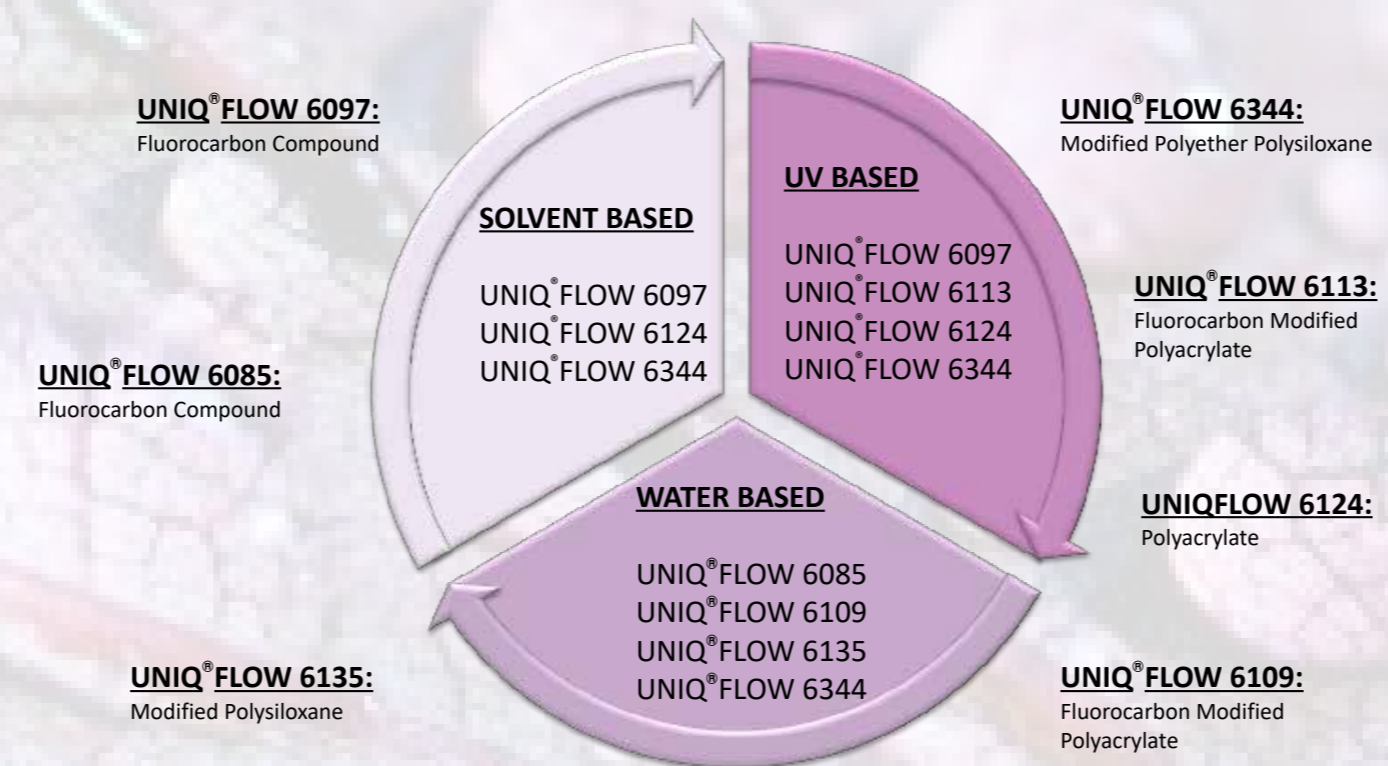
PRODUCTS	CHEMICAL STRUCTURE	ACTIVE SOLID %	DILUENT	WATER BORNE	SOLVENT BORNE	UV	PERFORMANCE
UNIQ <sup>®</sup> SPERSE 9012	Polymeric	40	WATER	●		●	Suitable for all the pigments, can be used for pigment concentrates
UNIQ <sup>®</sup> SPERSE 9305	Polymeric	50	Alkylbenzene/DIBK		●		Anti-floating and flooding, good for co-grinding system. Suitable for metal pigment orientation
UNIQ <sup>®</sup> SPERSE 9312	Polymeric	100	—		●		TiO2 and inorganic pigments dispersion, excellent in viscosity reduction
UNIQ <sup>®</sup> SPERSE 9313	Polymeric	50	Bytul Acetate		●		Organic and pigments dispersion, excellent for jetness improvement of carbon black
UNIQ <sup>®</sup> SPERSE 9315	Polymeric	50	EA		●		Good compatibility, suitable for high gloss coating
UNIQ <sup>®</sup> SPERSE 9330	Polymeric	100	—	●	●		TiO2 and inorganicpigment dispersions, excellent in viscosity reduction
UNIQ <sup>®</sup> SPERSE 9350	Polymeric	45	PMA/BA		●		Good compatibility with resins and solvents. Suitable for all pigments dispersion
UNIQ <sup>®</sup> SPERSE 9380	Polymeric	100	—	●	●		Suited for all pigments, can be used fro pigment concentrates
UNIQ <sup>®</sup> SPERSE 9450	Polymeric	100	—	●	●		Suitable for universal tinters for all pigments dispersion. Especially good in TiO2 and inorganic pigments dispersion with good sedimentation and anti-floating properties
UNIQ <sup>®</sup> JET 9506	Polymeric	30	PMA/BA		●	●	Good color developing for most of the organic pigments, improved viscosity, gloss and color strength
UNIQ <sup>®</sup> JET 9510	Polymeric	100	—		●	●	Suitable for all pigments dispersion in solvent borne and UV system
UNIQ <sup>®</sup> JET 9515	Polymeric	50	PMA		●	●	Organic and inorganic pigments dispersion, excellent for jetness improvement of carbon black
UNIQ <sup>®</sup> JET 9520	Polymeric	100	—		●	●	Suitable for all pigments dispersion in solvent borne and UV system
UNIQ <sup>®</sup> JET 9525	Polymeric	50	PMA		●	●	Organic and inorganic pigments dispersion, good storage stability
UNIQ <sup>®</sup> JET 9550	Polymeric	100	—	●	●	●	Suitable for all pigments dispersion in solvent-, water-based and UV system
UNIQ <sup>®</sup> JET 9560	Polymeric	100	—	●	●	●	Suitable for all pigments dispersion in solvent-, water-based and UV system



## UNIQ<sup>®</sup> FLOW

Flow and leveling agent plays 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**



PRODUCTS	CHEMICAL STRUCTURE	ACTIVE SOLID %	DILUENT	WATER BORNE	SOLVENT BORNE	UV	PERFORMANCE
UNIQ <sup>®</sup> FLOW 6085	Polymeric Fluorocarbon Compound	100	—	●	●	●	Excellent fast leveling, good substrate wetting, good defoaming and heat stable
UNIQ <sup>®</sup> FLOW 6097	Polymeric Fluorocarbon Compound	100	—		●	●	Excellent fast leveling, good substrate wetting, good defoaming and heat stable
UNIQ <sup>®</sup> FLOW 6109	Fluorocarbon Modified Polyacrylate	60	Sec Butanol	●	●	●	Compatible in water borne and solvent borne, helps in leveling and substrate wetting, suitable in high gloss application
UNIQ <sup>®</sup> FLOW 6113	Fluorocarbon Modified Polyacrylate	70	PMA		●	●	Helps in leveling and substrate wetting, suitable in high gloss application
UNIQ <sup>®</sup> FLOW 6124	Polyacrylate	50	PMA		●		Good compatibility, and improved leveling, good recoatability and heat stable
UNIQ <sup>®</sup> FLOW 6135	Organically Modified Polysiloxane	100	—	●	●	●	Excellent substrate wetting, good recoatability
UNIQ <sup>®</sup> FLOW 6344	Organically Modified Polysiloxane	100	—		●		Good substrate wetting and leveling, improved slip hand feeling



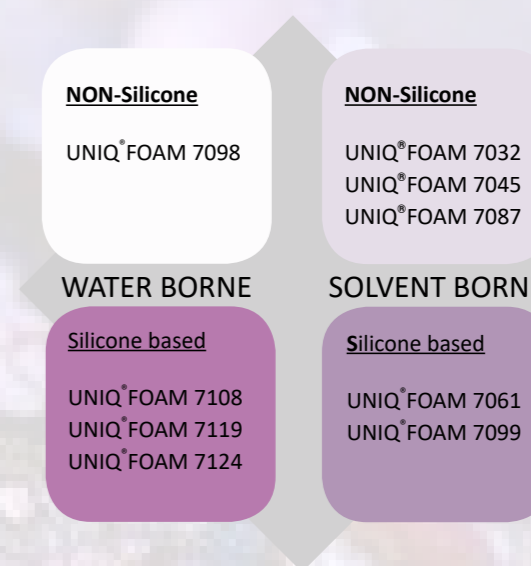
## UNIQ<sup>®</sup> FOAM

The industrial processes, foam can cause serious problems like:

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

To avoid this issues, the need for a defoamer or air-release agents is necessary. **UNIQCHEM** offers these additives under the brand **UNIQ<sup>®</sup> 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 foamed 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.



PRODUCTS	CHEMICAL STRUCTURE	DOSAGE %	WATER BORNE	SOLVENT BORNE	PERFORMANCE
UNIQ <sup>®</sup> FOAM 7032	Non Silicone	0.1-0.7		●	Strong effective non-silicone defoamer, less inter adhesion influence
UNIQ <sup>®</sup> FOAM 7045	Non Silicone	0.1-1.0		●	Strong effective defoamer, suitable clear varnish
UNIQ <sup>®</sup> FOAM 7087	Non Silicone	0.1-1.0		●	Excellent compatibility, suitable for high solid formulation
UNIQ <sup>®</sup> FOAM 7098	Non Silicone	0.3-3.0	●		Anti-foaming and anti-popping in baking system, good leveling
UNIQ <sup>®</sup> FOAM 7061	Silicone	0.1-1.0		●	Good compatibility, suitable for high gloss top coating
UNIQ <sup>®</sup> FOAM 7099	Silicone	0.1-1.0		●	Strong effective silicone defoamer, suitable high solid and viscosity system
UNIQ <sup>®</sup> FOAM 7108	Silicone	0.2-1.0	●		Good compatibility, suitable for high gloss coating
UNIQ <sup>®</sup> FOAM 7119	Silicone	0.1-1.5	●		Effective foam release and defoaming property
UNIQ <sup>®</sup> FOAM 7124	Silicone	0.1-1.0	●		Strong defoamer, need high shearing rate to get consistant solution