Rheology Control in Printing Inks

The right choice to optimize performance in liquid inks

OUR LATEST DEVELOPMENTS

AEROSIL® E grades

All established fumed silica grades used for rheology control require high shear incorporation (milling) in order to ensure good incorporation and to display the best possible effectiveness.

Our novel AEROSIL® E product range now makes it possible to incorporate fumed silicas through normal stirring, while still achieving identical rheology behavior to established grades.

This saves time, energy and complexity.

Rheology control in liquid inks via fumed silica – AEROSIL®

Flexo- and gravure inks, as well as overprint varnishes, are rather low-viscosity liquids at printing viscosity. On press, a newtonian flow behavior is generally favorable. But in pigmented bases – especially upon storage – a certain yield point (high viscosity when no shear is applied) helps to prevent pigment or filler settling.

Fumed silicas are an excellent choice for solventborne, waterborne and RC formulations, as they support this anti-settling effect while maintaining low viscosities under shear. Our recommended grades can be found on the second page of this fact sheet.

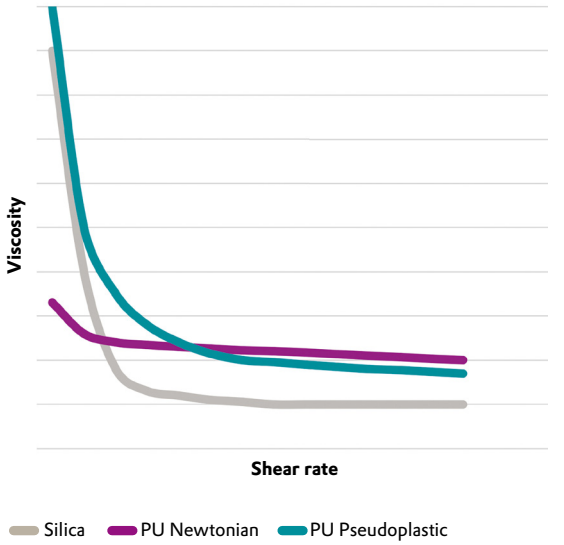
Associative thickening – TEGO® Viscoplus

In waterborne inks, associative PU thickeners can also be used to enable rheology control at different shear rates.

So called Newtonian grades provide high shear thickening, and overall increase the "body" of the ink. Pseudoplastic grades prevent settling and avoid too strong absorption of the ink onto highly porous substrates.

The Coating Additives grades of PU thickeners act independently of any pH changes and can be incorporated by normal stirring. The recommended TEGO® Viscoplus grades can be found on the second page of this fact sheet.

Typical flow curves of different thickener types

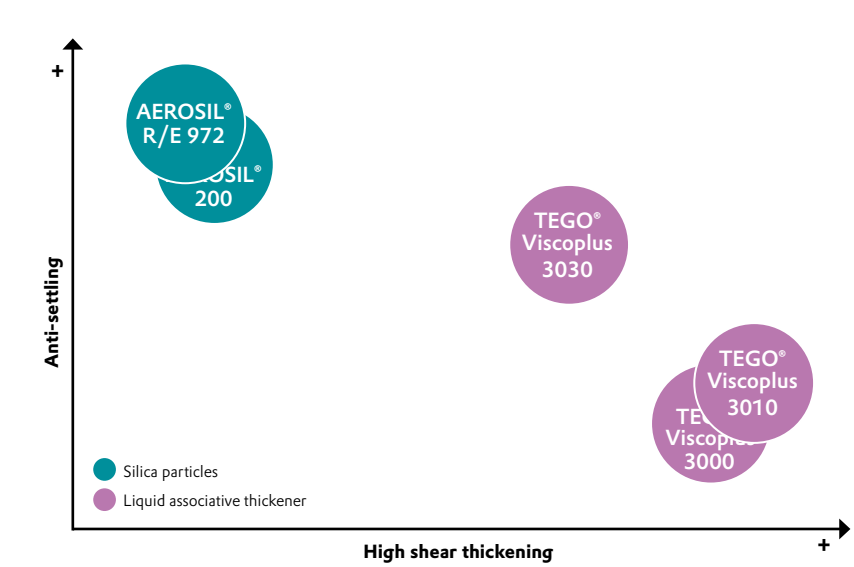


Click or scan the QR-code for more information!

EVONIK
Leading Beyond Chemistry

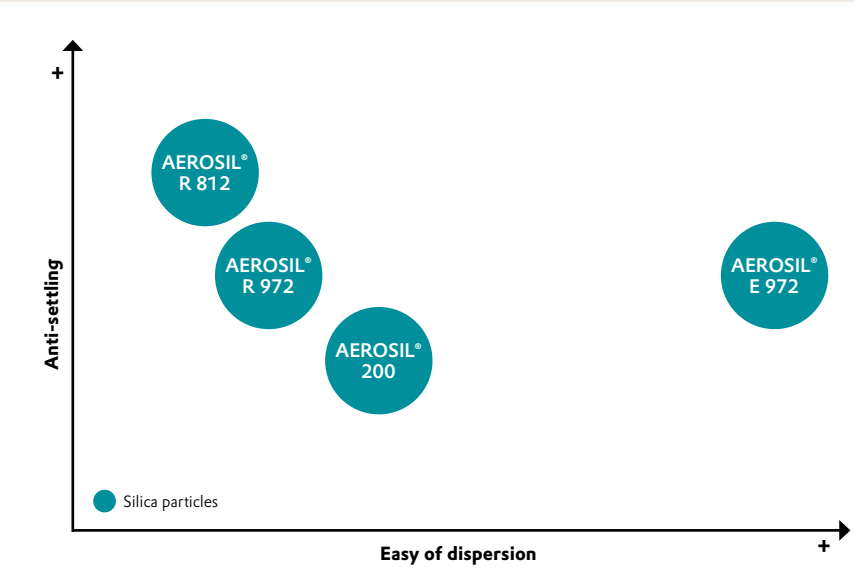
Rheology control for waterborne inks and varnishes

For waterborne inks and varnishes you can choose from or combine silica anti-settling agents and associative PU thickeners, depending on the applications needs.



Rheology control for solventborne and RC inks and varnishes

Different fumed silica grades with different surface area and/or surface treatment can be used in solventborne and RC formulations. Do not miss out on the chance to try the new easy-to-disperse grades (e.g. AEROSIL® E 972) which can be incorporated into clears by normal stirring, and can effectively prevent settling of waxes and matting agents.



Learn more ...

EVONIK OPERATIONS GMBH
Goldschmidtstraße 100
45127 Essen
Germany

Phone +49 201 173-2222
coating-additives@evonik.com
www.coating-additives.com

EVONIK
Leading Beyond Chemistry