

BYK-1781

Silicone Defoamer for Aqueous Systems to Eliminate Micro-foam Generated During Application

A well balanced-defoamer, the interaction of compatibility and efficiency is the guarantor for an easy application and a high quality of the final coating. The new BYK-1781 occupies all these features. The balanced silicone/polyether ratio leads to an excellent compatibility in a variety of aqueous coating systems e.g. pure acrylics, UV-systems and 2-pack PU-systems without a negative impact on clarity, haze and cratering. In addition the high efficiency of BYK-1781 makes it extremely suitable for difficult application methods like HVLP, Airless and Airmix to eliminate the occurring micro-foam in the coating film. The additive can be used in clear coats as well as pigmented systems and is solvent-free.

BYK-1781 – Excellent Transparency



Test method: Incorporation: 3 minutes @ 2 m/s

Application: Draw down – 150 µm wet film onto glass panels

Test system: Alberdingk AC 2739, Dosage: 1.0 % as supplied on total formulation by post addition

Benefits

- Excellent defoaming in several systems, e.g.
 - Pure acrylics
 - Aqueous UV-Systems
 - Water-borne 2-pack PU-systems
- High transparency and clarity in clear coats
- No or low influence on haze and cratering
- Excellent for various applications in particular
 - HVLP
 - Airless
 - Airmix

Applications

- Architectural coatings
- Wood & furniture coatings
- General industrial coatings
- Protective coatings

Product Properties

- Active substance: 100 %
- Density (20 °C): 1,00 g/ml
- Flash point: approx. 87 °C
- VOC-content: < 1.500 ppm
- SVOC: 1.5–5.0 g/l

BYK-1781 – Excellent Defoaming Action



Test method:

Incorporation: 3 minutes @ 4 m/s

Evaluation

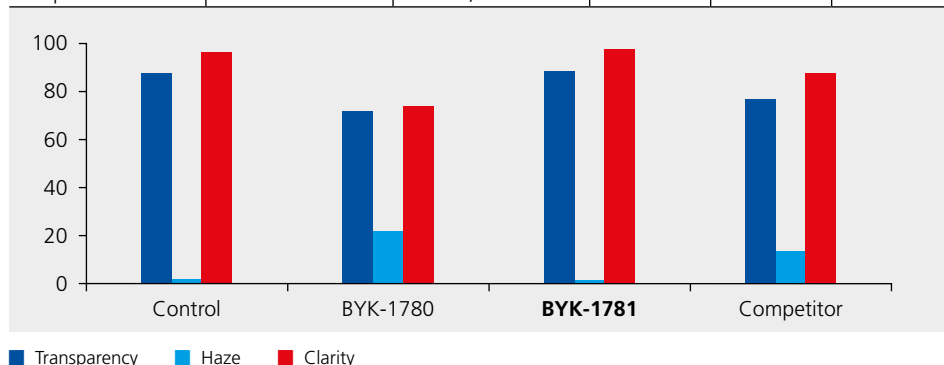
60 minutes @ 9 m/s immediately
pour-out on PE foil

Test system: Pigmented aqueous UV
system (customer system)

Dosage: 1.0 % as supplied on total
formulation by post addition

BYK-1781 – Excellent Defoaming Action & Transparency

Sample	Foam	Remarks	Clarity Port on Glass		
			T	H	C
Control	5	Foamy, clear	87.80	2.01	96.90
BYK-1780	2-3	Uneven, hazy	72.10	22.10	73.90
BYK-1781	2	Clear	88.70	1.42	98.30
Competitor	2	Uneven, clear	77.30	13.40	88.30



Test method:

Incorporation: 3 minutes @ 2 m/s

Application: Draw down – 150 µm wet
film onto glass panels; Sprayed by Graco
airless spray equipment onto plexiglas
panels, Nozzle size: 11/1000 inch,
Pressure: 110 bar,

Wet film thickness: ~175 µm

Test system: Alberdingk AC 2739

Dosage: 1.0 % as supplied on total
formulation by post addition

Evaluation

1 = excellent, no foam

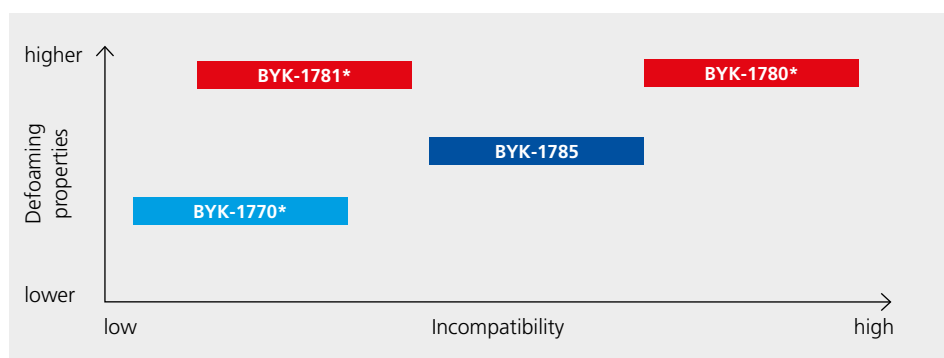
5 = unacceptable, severe foam

T = transparency: the higher, the better

H = haze: the lower, the better

C = clarity: the higher, the better

Defoamer Selection to Remove Process Related Micro-foam



*100 % solids content

■ Silicone defoamer with hydrophobic
particles

■ Silicone emulsion defoamer with
hydrophobic particles

■ Silicone defoamer without particles

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