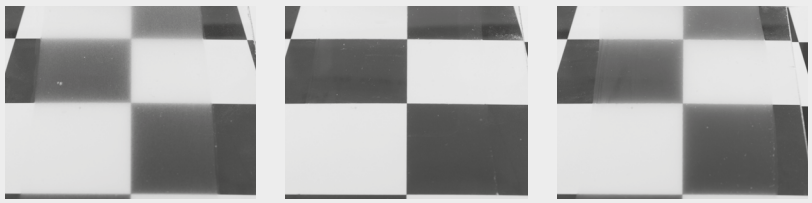
BYK
Additives & Instruments

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 includes 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 such as HVLP, Airless and Airmix to eliminate the micro-foam that occurs 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



1 % BYK-1780 | 1 % **BYK-1781** | 1 % Competitor

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
  - Aqueous 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

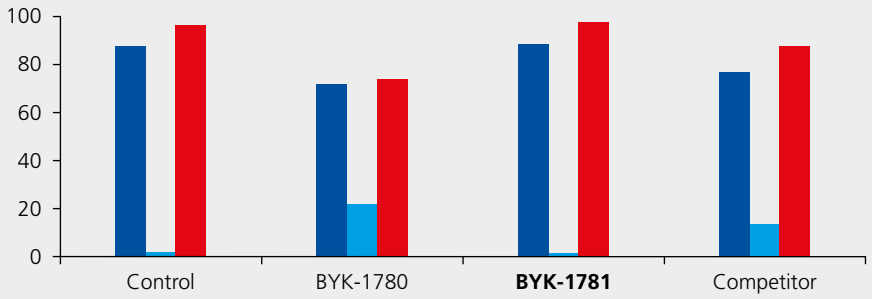
BYK-1781 – Excellent Defoaming Action

BYK-1780 **BYK-1781** BYK-1785

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) based upon total formulation by post addition

BYK-1781 – Excellent Defoaming Action & Transparency

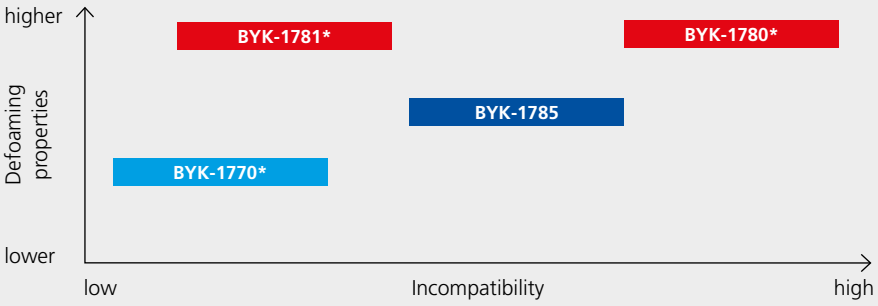
Sample	Foam	Remarks	Clarity Port on Glass		
			T	H	C
Control	5	Foamy, clear	87.80	2.01	96.90
BYK-1780	2–3	Uneven, hazy	72.10	22.10	73.90
BYK-1781	**2**	**Clear**	**88.70**	**1.42**	**98.30**
Competitor	2	Uneven, clear	77.30	13.40	88.30



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) based upon 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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BYK Additive Guide

Available on the App Store

Google play

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