BYK-3483

Modern, multi-functional silicone surface additive for aqueous systems, especially with low co-solvent content

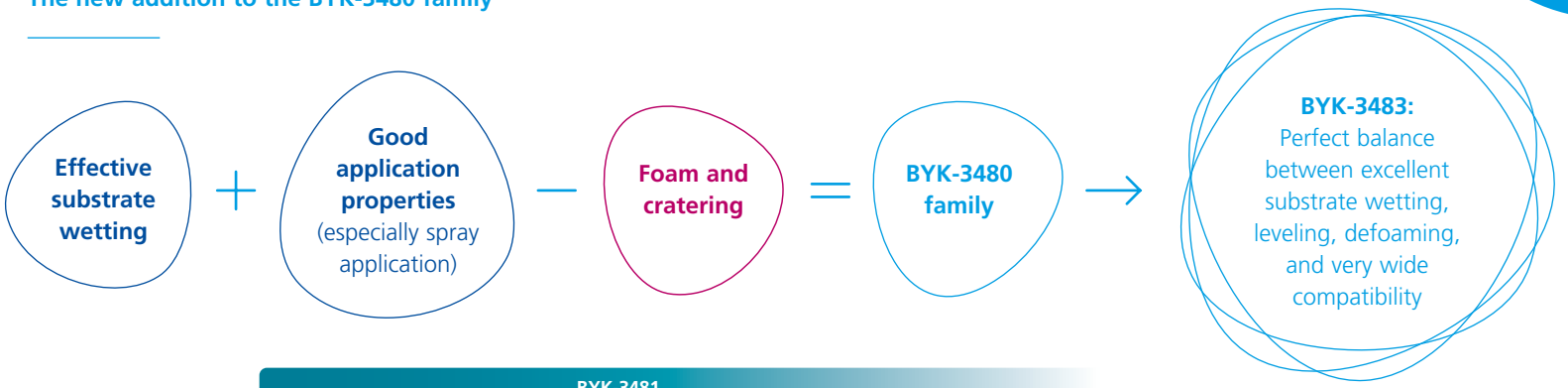
The general trend in the industry is toward high-solid, solvent-free, or aqueous systems. With aqueous systems, the industry faces major challenges that require strong and versatile additives. For example, the increasing use of low-polarity substrates requires additives that greatly reduce surface tension. In addition, the additives should offer very good anti-cratering and anti-contamination properties, as some resin systems and special applications require strong defoamers, which can cause side effects such as dewetting or cratering. Contamination by low-polarity liquid droplets or dust can also occur.

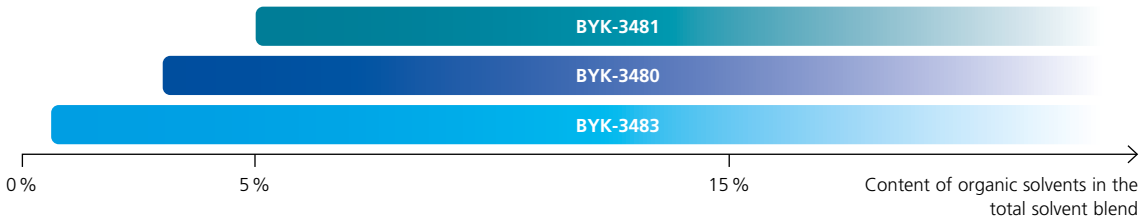
In order to cover all these requirements with only one product, BYK has developed another special additive that combines different functions such as wetting, leveling, and defoaming and at the same time is suitable for different aqueous systems from lower to higher polarity. BYK-3483 expands the range of applications of the BYK-3480 family by being particularly suitable for systems with a very low co-solvent content and offering a good balance between defoaming effect and excellent compatibility in various aqueous systems. It can also be used in solvent-free UV systems.

Benefits

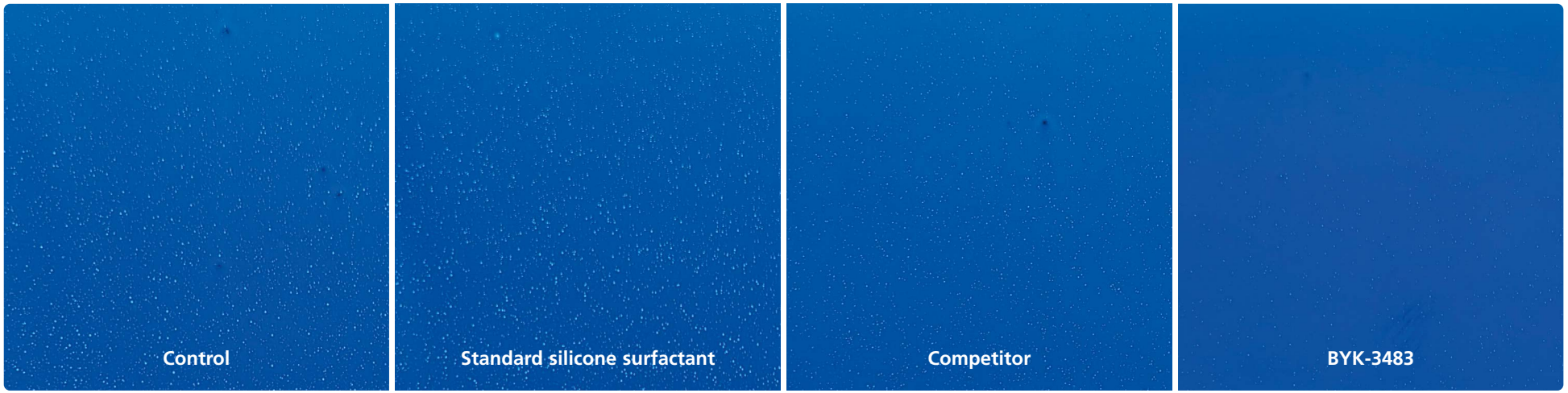
- Excellent substrate wetting and leveling with one additive
- Strong reduction of surface tension
- Defoaming effect
- Anti-cratering properties and pinhole elimination
- Strong contamination resistance
- Universal and good compatibility: suitable for very low up to higher organic co-solvent content

The new addition to the BYK-3480 family





BYK-3483 – Excellent anti-cratering properties and pinhole elimination in the cured coating



Test system: Aqueous baking system
Additive dosage: 0.5 % active substance
Test method: Photos taken of the cured coating (20 min, 140 °C) on a PET film in front of a flashlight

Recommended use

- General industrial coatings
- Leather finishes and coated fabrics
- Printing inks
- Marine and protective coatings
- Architectural coatings
- Wood and furniture coatings
- Floor coatings
- Adhesives and sealants

Technical data

- Polyether-modified dimethylpolysiloxane
- Density (20 °C): 1.03 g/ml
- Active substance: 100 %
- Flash point: > 100 °C
- Recommended dosage: 0.05–0.5 % additive (as supplied) based on the total formulation

BYK-3483 – Strong surface tension reduction in various aqueous systems

Surface tension in mN/m

	2-pack PU clearcoat	Aqueous matting UV system	Aqueous glossy UV system	Aqueous baking system
Control	32.0	31.4	32.3	31.8
Standard silicone surfactant	27.7	25.4	29.5	25.7
Competitor	25.4	22.4	28.3	24.7
BYK-3483	23.7	21.7	28.7	23.6

Additive dosage: 0.5 % active substance

Your local contact

BYK-Chemie GmbH
Abelstraße 45
46483 Wesel
Germany
Tel +49 281 670-0

info@byk.com
www.byk.com

Download our app: **byk.com/app**

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