

# BYK-1797

Silicone-containing, highly effective defoamer and air release agent for solvent-borne, high-solid and solvent-free 100 % UV printing inks and overprint varnishes as well as PUR-based thermosets. Process additive for thermoset resin systems and polishes (Pickering emulsions).

## Product Data

### Composition

Polyether-modified foam-destroying polysiloxanes

### Typical Properties

The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Active substance: 100 %

Density (20 °C): 0.99 g/ml

### Food Contact Legal Status

For the current food contact legal status, please contact our product safety department or visit [www.byk.com](http://www.byk.com) for further information.

### Storage and Transportation

Mix well before use.

## Applications

### Printing Inks

#### Special Features and Benefits

BYK-1797 is a highly effective, silicone-containing defoamer and is particularly suited to radiation-curable screen printing inks. The defoaming effect is achieved even at a low dosage, higher additive quantities improve leveling and substrate wetting. At adequate shear, the additive can also be used in liquid radiation-curable or aqueous printing inks.

#### Recommended Levels

0.02-2 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

#### Incorporation and Processing Instructions

To ensure the full effect, the defoamer should be added as early as the grinding stage or at the start of the manufacturing process. If post-adding, ensure a sufficiently high shear force in order to distribute the additive well and to prevent cratering.

## Thermosets

### Special Features and Benefits

Depending on the dosage, BYK-1797 is a highly effective, silicone-containing air release agent, leveling agent or process additive/compatibilizer. The additive is particularly suitable for polyurethane systems. The air-release effect is achieved even at a low dosage, higher additive quantities improve leveling and substrate wetting. Increase the dosage further and BYK-1797 will display emulsifying properties. Release properties could be observed in isolated systems.

### Recommended Levels

0.05-3 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

### Incorporation and Processing Instructions

To ensure the full effect, the additive should be added at the start of the manufacturing process. If post-adding, ensure a sufficiently high shear force in order to distribute the additive well.

When using as a process additive/compatibilizer, the additive should be added to the polyol before adding the incompatible components.

## Care Products and Polishes

### Special Features and Benefits

BYK-1797 is a process additive that contains silicone. Its hydrophobic effect as a Pickering emulsion achieves a high gloss effect on rubber and plastic surfaces. On glass substrates, BYK-1797 acts as an anti-fogging additive without disruptive light reflections.

### Recommended Levels

10-25 % additive as supplied in the Pickering emulsion combined with 0.9 % LAPONITE-RD (as supplied).

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

### Incorporation and Processing Instructions

BYK-1797 must be emulsified together with LAPONITE-RD using a high-speed stirrer (e.g. Ultra-Turrax, Dispermat AS or Dispermat with SR technology) at 20,000 rpm in water. The aqueous emulsion is then ready for use as a care product.



Additive Guide



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