# BYK-3772

Silicone-containing surface additive for solvent-borne coating systems and UP gel coats with a strong reduction of surface tension. Improves surface slip, solvent and weather resistance as well as anti-blocking, and reduces susceptibility to dirt. Thermally stable and OH-functional.

## Product data

**SVHC label-free (EU SDS)**
**Aromatic-free***
**Tin-free**

**Composition**
Solution of polyester-modified, hydroxy-functional polydimethylsiloxane

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

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|---|---|
| Density (20 °C): | 0.99 g/ml |
| Non-volatile matter (10 min, 150 °C): | 25 % |
| Solvents: | Methoxypropylacetate/monophenyl glycol 93/7 |
| Flash point: | 45 °C |
| OH value: | ca. 30 mg KOH/g |

**Storage and transportation**
To be stored and transported at a temperature below 50 °C. Separation or turbidity may occur at temperatures below 5 °C.

**Special note**
BYK-3772 is a low-cycle, tin-free, and aromatic-free* version of BYK-370. The cyclic siloxane content D4/D5/D6 is in each case less than 0.1 %, therefore the SVHC label is not required in the safety data sheet.

## Applications

### Coatings industry

**Special features and benefits**
Thanks to its high surface activity, the additive accumulates on the surface of the coating. Its reactivity allows it to be incorporated into the polymer network and therefore to be anchored in the coating surface. BYK-3772 improves surface slip, solvent and weather resistance as well as anti-blocking, and reduces susceptibility to dirt. If the additive is fixed in the coating surface via its reactive groups, these properties remain present longer than with conventional, non-reactive polysiloxanes. The additive also reduces surface tension, which improves substrate wetting. It improves leveling and prevents the formation of Bénard cells.

* Contains no intentionally added benzene, toluene, or xylene solvents.

**Recommended use**
BYK-3772 reacts with the resin via primary OH-groups and is primarily used in solvent-borne 2-pack polyurethane systems. It may also react with the following binders: alkyd/melamine, polyester/melamine, acrylate/melamine, self-crosslinking acrylates, epoxides. It is preferably used in wood and furniture coatings as well as can coatings.

**Recommended levels**
0.1–1.0 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

**Incorporation and processing instructions**
The additive can be incorporated during any stage of the production process, including post-addition.

**Special note**
When using the coatings in exterior areas, weathering removes the additive along with the top resin layer from the coating early on. Tests must be performed to determine whether these conditions allow the additive to be effective for a sufficiently long period of time. If the additive is used in coating systems that incorporate it via its functional groups, it is important that the coating is carefully and evenly sanded before recoating or retouching in order to facilitate sufficient adhesion.

## Thermosets

**Special features and benefits**
The additive improves leveling in unsaturated polyester-based gel coats. It also prevents the formation of craters and fish eyes and facilitates the acceptance of spray mist or dust.

**Recommended levels**
0.1–0.3 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

**Incorporation and processing instructions**
The additive can be incorporated during any stage of the production process, including post-addition. It has proven successful to add the additive at the end of the process.

**Special note**
Unlike silicone oils, this additive is very user-friendly. However, before use, one should determine in a test series whether surface defects occur in certain systems.

## Leather finishes and coated fabrics

**Special features and benefits**
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## Recommended use

BYK-3772 reacts with the resin via primary OH-groups and is primarily used in solvent-borne 2-pack polyurethane systems.

## Recommended levels

0.1–1.0 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

## Incorporation and processing instructions

The additive can be incorporated during any stage of the production process, including post-addition.



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