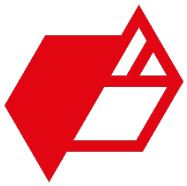


AKTISIL AM/89

Field of application: Paint & Varnish

1. Description

AKTISIL AM/89 is an activated SILLITIN Z 89, produced by modifying the surface with an amino functional group. The by-products split off during the treatment reaction are largely removed during the production process which firmly attaches the functional group to the filler surface. This helps minimize undesirable side effects, as they are potentially encountered with in-situ mixing (direct addition of additive into the compound).

During the cross-linking (hardening) of the coating system, the amino groups of AKTISIL AM/89 react with suitable functional groups of the binder or build up a strong interaction in the form of hydrogen bonds.

Characteristics

Appearance		free-flowing powder
Color CIELAB scale:	L* a* b*	96.0 0.1 3.6
Residue > 40 µm		30 mg/kg
Volatile matter at 105 °C		0.2%
Densitiy		2.6 g/cm³
Particle size distribution	D_{50} D_{97}	2.4 µm 10.0 µm
Oil absorption		60 g/100 g

Packaging

Paper bags	on request
EVA bags	on request
Big Bags	on request

Shelf life

2 years if stored properly under dry conditions.

2. Applications

In paint and varnish applications AKTISIL AM/89 can be used as a functional filler either on its own or combined with extenders or matting agents. The best effect is achieved in binder systems which have functional groups with active hydrogen or which can react with. Hydrogen bonds can also be formed with non-reactive, polar groups.

In particular these include:

- epoxy resins
- polyurethane resins
- acrylic resins
- alkyd resins
- polyester resins
- phenol, melamine and urea resins
- polysulfide systems
- all stoving paints/enamels

It can be used whenever optimum wettability, low yield point (including a high solids content) and a very low tendency to settle are just as important as excellent mechanical properties and high chemical and corrosion resistance.

Aktisil AM/89 has a high brightness and color neutrality and is therefore also suitable for use in light-colored and color-sensitive applications.

Fields of application

- high performance, reactive industrial coatings
- reactive adhesives
- sealing and embedding compounds
- stoving paints/enamels including powder coatings
- anti-corrosive coatings including DTM and clear coats
- OEM primer-surfacer, water dilutable, with high gloss and good stone chip resistance

Minimum film thickness:
> 10 µm, less in special cases

Metering:
up to 55 % depending on intended application

3. Benefits

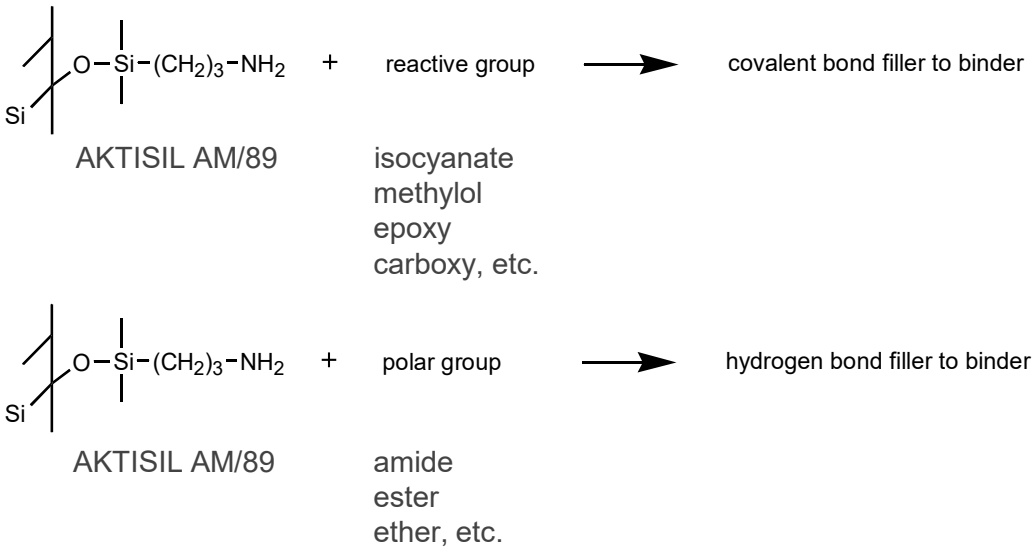
The excellent properties of the base material SILLITIN Z 89 are retained:

- high filling ratio
- outstanding dispersion behavior
- good pigment dispersion (spacer effect)
- low abrasiveness
- very low tendency to settle
- soft sediment
- good edge covering
- quick drying
- weathering resistance
- breathability
- scratch resistance
- high abrasion resistance
- good transparency
- slight matting effect

AKTISIL AM/89 also provides the following benefits compared with the base SILLITIN Z 89:

- improved wettability even using binders with low polarity
- reduction of the yield point with high solids content
- increased tensile and bending strength as well as impact strength
- improved abrasion resistance and scratch resistance
- increased resistance to chemicals and moisture
- improvement of the corrosion protection effect, reduction/avoiding of milky-white blushing after humidity test of epoxy clear coat
- increase of gloss and stone chip resistance

4. Possible reaction at user‘s plant (model)



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