

## AKTISIL MAM-R

Field of application: Paint & Varnish

### 1. Description

AKTISIL MAM-R is an activated SILLITIN V 85, produced by modifying the surface with a methacrylic 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 to the compound).

During curing (hardening) of the paint formulation, the methacryl groups of AKTISIL MAM-R react with the functional groups of the binder, especially in the presence of radicals.

### Characteristics

Appearance		free-flowing powder
Color CIELAB scale:	L*	93.2
	a*	0.8
	b*	8.8
Volatile matter at 105 °C		0.2 %
Density		2.6 g/cm <sup>3</sup>
Particle size distribution	D <sub>50</sub>	4.5 µm
	D <sub>97</sub>	18.0 µm
Oil absorption		45 g/100 g
Refractive index n		1.55

### Packaging

Paper bags	à 25 kg
EVA bags	≤ 20 kg
Big Bags	550 - 900 kg

### Shelf life

2 years if stored properly under dry conditions.



## 2. Applications

In paint and varnish applications AKTISIL MAM-R can be used as a functional filler either on its own or combined with extenders or flattening agents. The best effect is achieved in binder systems which polymerize or cure due to a radically initiated reaction.

In particular these include:

- UV or electron-beam cured paints
- unsaturated polyester resins
- vinyl ester and acrylic resins
- other radically cured systems

It is also suitable for melamine and UF resins.

It can be used whenever optimum wettability, minimum yield point (even with a high solids content) are just as important as high chemical resistance, very high abrasion resistance, excellent transparency and an excellent flattening effect.

Information on compliance with certain regulations/recommendations and other safety-related aspects: [Product safety information](#)

## Fields of application

- UV-cured wood and foil coatings
- reactive adhesives
- sealing and embedding compounds
- stoving paints/enamels
- road marking paints
- special emulsion paints
- anti-corrosive coatings

### Minimum film thickness:

> 20 µm, less in special cases

### Metering:

up to 55 % depending on intended application



### 3. Benefits

The excellent properties of the base material SILLITIN V 85 are retained:

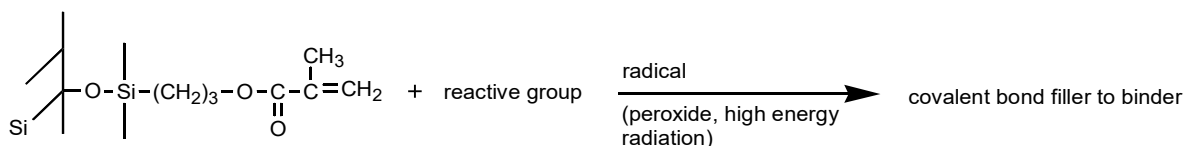
- high filling ratio
- outstanding dispersion behavior
- good pigment dispersion (spacer effect)
- relatively low abrasiveness
- low tendency to settle
- good wet edge strength
- quick drying
- weathering resistance
- breathability
- scratch resistance
- high abrasion resistance
- excellent transparency
- very good flattening effect

**AKTISIL MAM-R also provides the following benefits compared with the base SILLITIN V 85:**

- optimum wettability even using binders with low polarity
- minimization 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
- improved swelling characteristics
- minimal water absorption with high water vapor permeability

### 4. Possible reaction at user's plant (model)

Vinyl polymers; (Meth-)acrylic polymers; UP resins



AKTISIL MAM-R

a) unsaturated polymer  
b) monomer

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