

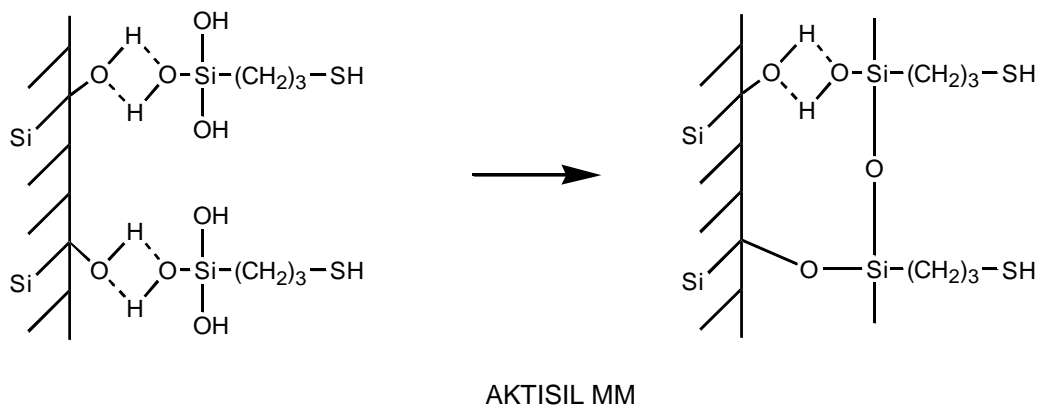
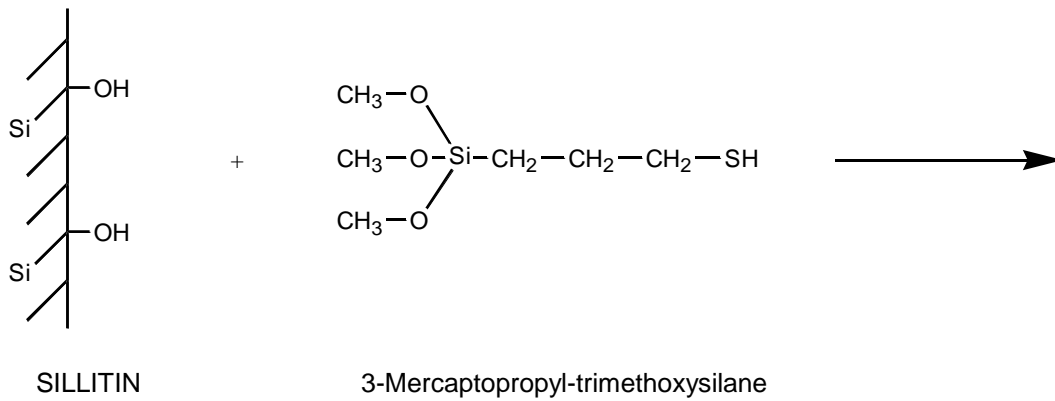
AKTISIL MM

TECHNICAL DATA SHEET - Field of application: PAINT & VARNISH

1. Description	2. Applications	3. Benefits
<p>AKTISIL MM is an activated SILLITIN Z 86, produced by modifying the surface with 3-mercaptopropyl-trimethoxy silane. The by-products split off during the treatment reaction are largely removed during the production process which firmly attaches the silane to the filler surface. This helps minimize undesirable side effects, as they are potentially encountered with in-situ mixing (direct addition of silane to the compound).</p> <p>During curing (hardening) of the paint formulation, the mercapto groups of AKTISIL MM react with appropriate functional groups of the binder.</p> <p>Characteristics: Appearance: free-flowing powder Brightness Y DIN 53 163: 81 Brightness Z DIN 53 163: 76 Volatile matter at 105 °C: 0.7 % Density: 2.6 g/cm³ Particle size distribution d₅₀: 2.2 µm d₉₇: 10.0 µm Oil absorption: 55 g/100 g Refractive index n: 1.55</p> <p>Packaging: Paper bags: à 25 kg PE bags: ≤ 25 kg EVA bags: ≤ 20 kg Big Bags: 550 - 900 kg</p> <p>Shelf life: At least two years if properly stored under dry conditions.</p>	<p>In paint and varnish applications AKTISIL MM can be used as a functional filler both on its own or combined with other extenders or flattening agents. The best effect is achieved in binder systems which have functional groups with active hydrogen or which polymerize or cure as a result of these. In particular these include:</p> <ul style="list-style-type: none"> • amine-type or carboxylic anhydride-cured epoxy resins • polyurethane systems including TPU • polysulfide systems • acrylic acid polymers • melamine and UF resins • phenol formaldehyde resins <p>It can be used whenever optimum wettability, low yield point with a high solids content and very low tendency to settle are just as important as excellent mechanical properties and high chemical resistance.</p> <p>Fields of application:</p> <ul style="list-style-type: none"> • high-grade, reactive industrial paints • reactive adhesives • sealing and embedding compounds • stoving paints/enamels • anti-corrosive coatings <p>Minimum film thickness: > 10 µm, less in special cases.</p> <p>Metering: up to 50 % depending on intended application.</p>	<p>The excellent properties of the base material SILLITIN Z 86 are retained:</p> <ul style="list-style-type: none"> • high filling ratio • outstanding dispersion behavior • good pigment dispersion (spacer effect) • low abrasiveness • very low tendency to settle • soft sediment • good wet edge strength • quick drying • weathering resistance • breathability • scratch resistance • high abrasion resistance • good transparency • slight flattening effect <p>AKTISIL MM also provides the following benefits compared with the base SILLITIN Z 86:</p> <ul style="list-style-type: none"> • 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 • improved swelling characteristics • improved anti-corrosion properties

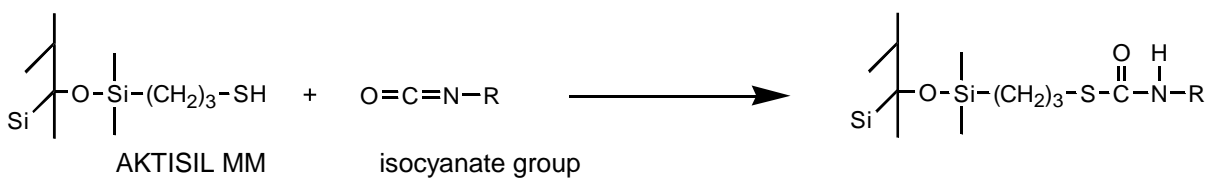
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4. Reactions at HOFFMANN MINERAL (model)



5. Possible reactions at user's plant (model)

1. PUR systems polymer synthesis



2. EP systems

