

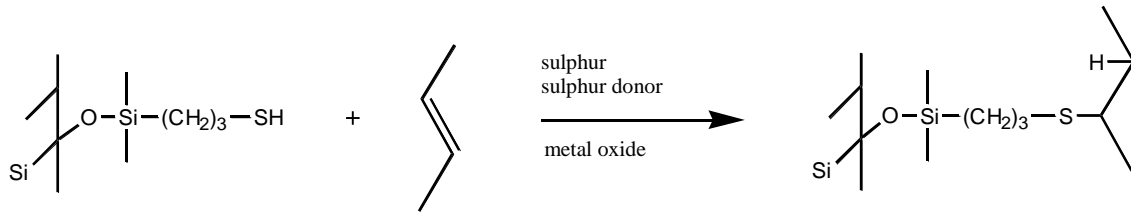
AKTISIL MM

TECHNICAL DATA - Field of Application: ELASTOMERS

1. Description	2. Application	3. Benefits
<p>AKTISIL MM is an activated SILLITIN Z 86, produced by modifying the surface with mercapto 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 vulcanization the mercapto groups of the AKTISIL MM react in the presence of accelerators and sulfur or metal oxide, forming preferably monosulfide bonds with the polymer.</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: 2.0 µm D₉₇: 10.0 µm Oil absorption: 45 g/100 g</p> <p>Packaging: Paper bags: à 25 kg PE bags: ≤ 25 kg EVA bags: ≤ 20 kg Big Bags: 550 - 900 kg Bulk: ≤ 24 t</p> <p>Shelf life: 3 years if stored properly under dry conditions.</p>	<p>In elastomer applications AKTISIL MM can be used as a functional filler either on its own or in combination with other non-reinforcing or reinforcing fillers. In addition to curing systems based on sulfur and sulfur donors the optimum effect is achieved primarily with metal oxide curing systems.</p> <p>It can be used whenever high tensile strength and high modulus, combined with low tensile and compression set, are as important as excellent processing and extrusion properties.</p> <p>These properties are an ideal combination, particularly for pressure-less cured extruded products and sponge rubber.</p> <p>With appropriate matching of the cure system bonds to the polymer are predominantly monosulfide. This makes AKTISIL MM particularly suitable for products with high aging and compression set requirements at high temperatures.</p> <p>Fields of application:</p> <ul style="list-style-type: none">• pressure-less cured extruded products (profiles, hoses)• cable sheaths and cable insulation• sponge rubber products• molded products and seals• radiator hoses <p>Methods of processing: Any process commonly used in the rubber industry.</p> <p>Elastomers: NR, IR, BR, particularly CR, SBR, NBR, partly-hydrogenated HNBR, IIR, BIIR, CIIR; EPDM</p> <p>Metering: SBR: 50 - 250 phr NBR: 50 - 250 phr EPDM: 50 - 300 phr NR: 50 - 200 phr</p>	<p>The excellent properties of the base material SILLITIN Z 86 are retained:</p> <ul style="list-style-type: none">• good, fast incorporation• very good dispersion behavior• good rheological properties• excellent surfaces• very good extrusion properties• good heat conductivity• no negative influence on curing rate• low tensile and compression set• high electric insulation resistance• good aging properties• high chemical resistance• matting effect <p>AKTISIL MM also provides the following benefits compared with the base SILLITIN Z 86:</p> <ul style="list-style-type: none">• increased tensile strength• maximum tensile strength combined with higher level of filling• increase in modulus• reduced tension and compression set• reduced abrasion• improved resistance to liquids• electric insulation resistance remains high and constant after storage in water

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4. Possible reactions during vulcanization at user's plant (model)



AKTISIL MM

unsaturated
polymer