

AKTISIL PF 777/89

Field of application: Elastomers

1. Description

AKTISIL PF 777/89 is an activated SILLITIN Z 89, produced by modifying the surface with an alkyl 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).
The non-polar alkyl groups of the coating agent and a special process technology in the production of AKTISIL PF 777/89 create strong hydrophobicity.

Characteristics

Appearance	free-flowing powder	
Bulk density	0.3 g/cm³	
Color CIELAB scale:	L*	96
	a*	0.2
	b*	4.2
Volatile matter at 105 °C	0.3 %	
Density	2.6 g/cm³	
Particle size distribution	D ₅₀	2.1 µm
	D ₉₇	10 µm
Oil absorption	35 g/100 g	
Water absorption acc. Baumann	≤ 0.1 %	

Packaging

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

Shelf life

3 years if stored properly under dry conditions.



2. Applications

In elastomer applications AKTISIL PF777/89 can be used as a functional filler either on its own or in combination with other non-reinforcing or reinforcing fillers.

The optimum effect is often achieved in hard and highly viscous compounds.

Areas of application are always where hydrophobicity, very low viscosity and very good flow and extrusion properties are just as important as low modulus values and high elongation at break.

It is particularly suitable for high viscosity, low plasticizer containing hard compounds that must be easy to process without processing aids and still require a sufficiently high elongation at break.

It is also suitable for white or very bright compounds.

In adhesion primers for corrosion protection tapes, it achieves very good adhesion to the metal and, as a filler in unvulcanized/thermoplastic corrosion protection tapes, very low water absorption.

Fields of application

- extruded products like profiles and tapes
- sponge rubber products
- molded products and seals
- corrosion protection tapes
- adhesion primers for corrosion protection tapes

Methods of processing:

Any process commonly used in the rubber industry.

Elastomers:

Mainly non-polar elastomers such as EPDM, IIR

Metering:

30 - 300 phr



3. Benefits

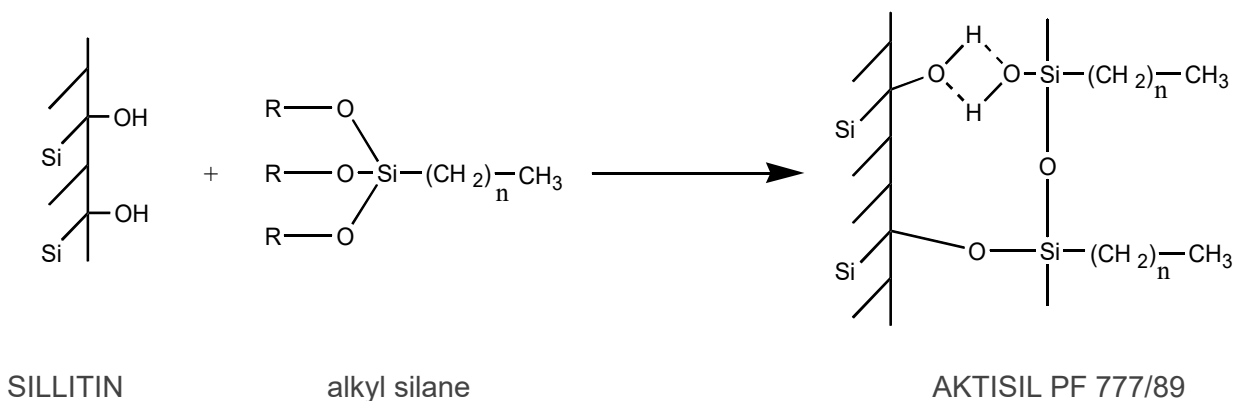
The excellent properties of the base material SILLITIN Z 89 are retained:

- good, fast incorporation
- very good dispersion behavior
- high filling ratio
- good rheological properties
- excellent surfaces
- very good extrusion properties
- good heat conductivity
- high curing rate
- low tensile and compression set
- high electric insulation resistance
- good aging properties
- high chemical resistance

AKTISIL PF 777/89 also provides the following benefits compared with the base SILLITIN Z 89:

- lower viscosity
- often better extrusion properties
- lower moduli
- often higher elongation at break
- hydrophobicity, lower water absorption, especially in unvulcanized/thermoplastic compounds

4. Reaction at HOFFMANN MINERAL (model)



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