



## KETTLITZ-Silanogran SI-69/GR KETTLITZ-Silanogran SI-69/GR 70

- technical leaflet -

A bifunctional polysulfidic organosilane for sulfur-crosslinked rubber mixtures containing silica or kaolin as a filler. It can be used for all elastomers and is recommended if improvements in tear resistance, modulus, compression set or abrasion are required.

Silanogran SI-69/GR has no influence on the t5 time, additionally lowers the Mooney viscosity and delays the reversion with NR compounds.

The previously liquid silanes are converted into a granulate form using carrier materials together with plasticizers and special waxes which protect the silanes against atmospheric moisture during storage. The granules also guarantee the following advantages:

- easy and safe handling
- exact weighing and dosing
- faster and better incorporation and dispersion in the rubber mixture

These advantages are particularly noticeable when changing from liquid silane to the preparation. In most cases, the exchange of liquid to granules can be done in a ratio of 1 : 1.8 for 50 % (not 1 : 2) and ideally even for 70 %: 1 : 1 (theoretically 1 : 1.42).

When using the silanes, it is very important to add them to the mixing process at the right time. The silanes should be mixed together with the rubber and fillers before all other rubber chemicals are applied. Stearic acid, zinc oxide and anti-aging agents should not be incorporated before the silanes.

After opening the packaging, the storage stability is limited. For this reason it is recommended to close the aluminum-coated PE bag (inner liner) carefully after each use.

### Properties

	<b>Silanogran SI-69/GR</b>	<b>Silanogran SI-69/GR 70</b>
Chemical Characteristics	bis-[3-(triethoxysilyl)-propyl]- tetrasulfane (50 %)	bis-[3-(triethoxysilyl)-propyl]- tetrasulfane (70 %)
Appearance	light granules (diameter approx. 8 mm)	
Active Substance (%)	50 ± 3	71 ± 3
Density at 20 °C (g/cm <sup>3</sup> )	approx. 1.17	approx. 1.23
Bulk Density (g/ml)		approx. 0.6
Ash (%)	29.5 ± 2.5	31.0 ± 2.5
Physiol. Behavior	see safety data sheet	
Storage Stability	1 year under suitable storage conditions	
Packing	hermetically sealed PE-bags of low melting foil (60–85 °C) of 1 kg each in cardboard boxes of 15 kg each	