



Technical Data

PRIMARY SS 169 Bis(triethoxysilylpropyl)polysulfide

CAS# 40372-72-3

PRODUCT DESCRIPTION

Primary SS 169 polysulfide silane is a bifunctional additive that enhances the performance of a variety of organic rubber formulations. A tetrasulfide group mid-molecule readily participates in the vulcanization of rubber. At either end of the molecule, triethoxy silane groups enable bonding to silica and many other inorganic materials. A cross-linked matrix of rubber, filler, and substrate can impart dramatically improved physical properties. Tensile strength, impact resistance, toughness and, abrasion resistance are increased, and rolling resistance of tires can be reduced.

PROPERTIES

Property	Value
Appearance*	yellow clear liquid
Total sulfur*	21.5-23.0%
Refractive index*	1.480-1.495
Specific gravity*	1.080-1.100
Viscosity (25°C)*	18 cps, max.
Flash point °C / °F	91 / 196
Boiling point °C / °F (decomposition)	250 / 482

* Specification

APPLICATIONS

Use SS 169 where organic rubber and inorganic surfaces come into contact. Virtually any organic rubber that can be vulcanized with sulfur

and is mineral-filled or must adhere to inorganic surfaces is a candidate for improvement with this silane. Natural, butadiene, and styrene-butadiene rubber may see improvements in performance with modification of SS169 silane. Inorganic materials coupled are talc, silica, glass, ceramic (including microspheres), many metals, and others.

SUGGESTED APPLICATIONS:

- Component of rubber tires to reduce rolling friction and improve efficiency,
- Component of shoe soles and other mineral-filled rubber items to increase abrasion resistance,
- Component of mineral-filled rubber goods to improve mechanical properties such as flexibility and impact resistance,
- More complete dispersion and viscosity reduction of certain pigment and filler dispersions, and
- Priming of difficult substrates to promote adhesion within the finished rubber matrix.

USE LEVELS

Use SS 169 at 1 to 10% rubber solids as a formulation component. Addition should be evaluated at various stages of compounding.

When using as a primer, 0.5 to 1.5% in ethanol or other suitable carrier should be applied to steel and other inorganic surfaces for optimum cohesion within the finished composite.

QUALITY

SS 169 is produced for Primary Silane under ISO and DIN quality systems. Purity is guaranteed.

PACKAGING

SS 169 is available in 22 kg pails and 200 kg drums. Sample size is 0.5 kg. Shelf life of unopened containers is one year from date of manufacture when stored at or below 25°C and away from sunlight.

SAFETY AND HANDLING

Before using SS 169, read the MSDS. Always wear personal protective gear appropriate to the situation. Dispose spilled or unused material in compliance with federal, state, and local regulations.

WARRANTY

The above information is believed correct and is for evaluation purposes only. Customer is required to have a thorough evaluation of this product performed by a qualified individual for suitability prior to use. Statements in this technical data sheet, other literature, or by employees of Primary Silane do not relieve the customer of the need to test incoming material. Warranty is limited to the replacement of defective material.