Silane Coupling Agent Crosile® 69

Description : Crosile 69 is a sulfur-containing silane coupling agent (TESPT, CAS 40372-72-3) used to improve filler–rubber bonding in silica-filled rubber.
Crosile 69 may be considered as an alternative to other commercial products. Suitability should be verified against the relevant specifications, performance requirements and processing conditions.

Chemical Name : Bis[3-(triethoxysilyl)propyl] tetrasulfide

CAS NO. : 40372-72-3

Chemical Formula : $(C_2H_5O)_3SiCH_2CH_2CH_2\text{-}S_4\text{-}CH_2CH_2CH_2Si(OC_2H_5)_3$

Structural Formula of Crosile 69 (TESPT)



SPECIFICATION

Test Item	Spec. Limits	Test Method
Appearance	Light yellow liquid	Visual
Sulfur content (%)	21.7–23.7	GB/T 30309
Average sulfur chain length	3.75±0.15	GB/T 30309
Impurity content (%)	≤ 3.0	GB/T 30309
Specific gravity (20 °C, g/cm^3)	1.070–1.090	GB/T 30309
Refractive index (20 °C)	1.4800–1.4950	GB/T 30309
Viscosity (20 °C, cps)	≤ 14	GB/T 30309
S_2 content (%)	17.0±3	GB/T 30309
S_3 content (%)	30.0±4	GB/T 30309
S_4 content (%)	24.0±3	GB/T 30309
S_5 to S_8 content (%)	27±3	GB/T 30309
Flash point (°C)	≥ 100	GB/T 30309
Chlorine content (%)	≤ 0.4	GB/T 30309

APPLICATION

1. Crosile 69 is a kind of multifunctional silane coupling agent that has been used successfully in the rubber industry. It is used to improve physical and mechanical properties of vulcanizates.
2. Crosile 69 is able to markedly improve tensile strength, tearing strength and abrasive resistance and reduce compression set of vulcanizates. In addition, it can reduce the viscosity and improve the processability of rubber products.
3. Crosile 69 is especially suitable to improve the reinforcing properties of fillers that contain hydroxyl groups in all unsaturated polymers having double bonds or their blends. Silica, talc powder, mica powder and clay can be used in combination with Crosile 69 in polymers such as NR, IR, SBR, BR, NBR and EPDM.

Recommended Dosage: 1.0–4.0 PHR

PACKAGING & STORAGE

Packaging
25 kg / 200 kg drums;
1,060 kg IBC tanks.

Storage
Keep in a cool, well-ventilated, and dry place away from direct sunlight.

Shelf Life
One year when stored in a cool, dry, ventilated area.

The information herein is based on our current knowledge and is intended for general guidance only. It does not constitute a warranty of any kind. Customers should conduct their own tests to determine the suitability of the product for their specific application.

CONTACT

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For technical, quality or product safety questions, please contact us.

NOTICE

The information and recommendations provided in this technical data sheet are based on our present state of knowledge, experience, and testing conducted under controlled conditions. However, they do not absolve the user from carefully inspecting and verifying all supplies immediately upon receipt. We reserve the right to alter product specifications or constants within the scope of technical progress and ongoing product development.

Because the actual handling, storage, processing, and application conditions of our products are beyond our direct control, especially when used in combination with raw materials from third parties, the recommendations contained herein must be confirmed by the buyer through preliminary trials under real operating conditions.

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