

Rhenogran® SDT-50

Predispersed rubber chemicals and additives

Function

Non-staining sulphur donor plus accelerator for the vulcanization of natural and synthetic rubbers

Product description

Composition:	50 % Phosphoryl polysulfide and 50 % elastomer binder and dispergators
Appearance:	off white to amber granules
Density, 20 °C:	approx. 1.15 g/cm ³
Physiological properties:	see safety data sheet

Use

Mode of action: Under common curing conditions Rhenogran SDT-50 liberates free sulfur, which, in contrast to normal sulfur, forms mono- and di-sulfidic bridges. These are causal for the excellent heat ageing resistance of Rhenogran SDT-50 vulcanizates. Blooming, generally observed when using thiuram disulfides as crosslinking agents, usually does not occur. Moreover, compounds cured with Rhenogran SDT-50 show excellent reversion resistance as observed in the broad curing plateau of the Rheometer curves. Rhenogran SDT-50 is therefore especially suitable in natural rubber compounds and all cases where high temperatures occur during the curing process, e.g. salt vulcanization and injection molding. Vulcanizates show favorable compression set values before and after hot air aging. The use of Rhenogran SDT-50 is recommended wherever a high degree of heat resistance is required. In many cases the amount of conventional antioxidants can be reduced.

Besides the reaction as a sulfur donor, Rhenogran SDT-50 has also an accelerating effect and is synergistic with other accelerators - also as an replacement for DPG. In addition, Rhenogran SDT-50 may improve the dispersion of polar fillers.

Processing: Rhenogran SDT-50 is easily incorporated into the rubber compound and should be added at the same time the normal sulfur or sulfur donor is added.

Dosage: The free sulfur amount should be adjusted. Typical sulfur content of Rhenogran SDT-50: 10.5 %. Starting formulations for a natural rubber stock are:

Rhenogran S-80: 0-2.5 phr
Rhenogran MBTS-80: 1-2.5 phr
Rhenogran SDT-50: 3-6 phr
Rhenogran ZDT-50: 1-4 phr

Application: Improved reversion resistance of NR articles, e.g. tire carcasses, engine mounts, etc. It can also be used to improve the aging properties of compounds based on SBR, NBR, and EPDM

Packaging

25 kg carton with PE bag inside on 900 kg skid.

Storage stability

In original closed containers under cool and dry conditions two years

Handling

For additional handling information on Rhenogran SDT-50 please consult material safety data sheet (MSDS)

Our technical advice - whether verbal, in writing or by way of trials - is given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended processes and uses. The application, use and processing of the products are beyond our control and, therefore, entirely your own responsibility. Should, in spite of this, liability be established for any damage, it will be limited to the value of the goods delivered by us and used by you. We will, of course, provide products of consistent quality within the scope of our General Conditions of Sale and Delivery.



LANXESS Deutschland GmbH
Business Unit Rhein Chemie
Kennedyplatz 1
D-50569 Cologne, Germany
<http://rch.lanxess.com>