

Rhenogran® DTDM-80

Predispersed rubber chemicals and additives

Function	Non-staining sulphur donor for the vulcanization of natural and synthetic rubbers	
Product description	Composition:	80% morpholine disulfide (4,4'-dithiomorpholine) 20% elastomer binder and dispersing agents
	Appearance:	grey granules
	Density, 20 °C:	approx. 1.25 g/cm ³
	Product characteristics of morpholinedisulphide	
	Melting point:	min. 120 °C
	Sulphur content:	25.5 - 29 %
	Sieve residue, 63 µm:	max. 8 %
	Physiological properties:	see safety data sheet

Use

Mode of action: Under normal curing conditions Rhenogran DTDM-80 liberates free sulphur which, in contrast to normal sulphur, mainly forms mono and diether bridges. These are responsible for excellent heat ageing resistance of the vulcanizates. Rhenogran DTDM-80 causes no blooming effects which are generally observed when using thiuramdisulphides as crosslinking agents. In contrast to compounds with Rhenogran CLD-80, compounds with Rhenogran DTDM-80 stand out for their increased safety in scorch properties. When the full curing temperature is reached, a quick vulcanization follows. Acid compounding ingredients may cause a premature decomposition of Rhenogran DTDM-80 and thus reduce the excellent scorch safety (long scorch time). In general the use of Rhenogran DTDM-80 is recommended whenever favourable compression set behaviour and advantageous ageing behaviour is required.

Processing: The thermoplastic, fully compatible elastomer binder which is combined with special dispersing agents allows quick absorption and excellent dispersion in the rubber. In this way, optimal activity of the effective substance is assured.

Dosage: According to our experience the following dosages have proved to be very good:

NR and SBR	with carbon-black	light-coloured fillers
Rhenogran DTDM-80	1.0 - 2.0	1.0 - 2.0 phr
Sulfur	0.25 - 1.0	0.25 - 1.0 phr
Rhenogran® CBS-80	0.5 - 0.75	- phr

Rhenogran MBTS-80	-	0.3 - 0.5 phr
Rhenogran TMTD-80	-	0.3 - 0.5 phr

NBR and IIR	NBR	IIR
Rhenogran DTDM-80	1.0 - 2.0	1.2 - 2.0 phr
Sulfur	0 - 0.5	1.0 - 1.75 phr
Rhenogran CBS-80	1.5 - 3.0	- phr
Rhenogran MBTS-80	-	1.0 - 2.5 phr
Rhenogran TMTD-80	0.5 - 2.5	1.0 - 2.5 phr

for the so-called sulphurless vulcanization

Rhenogran DTDM-80	1.25 - 2.0 phr
Rhenogran CBS-80	1.0 - 1.5 phr
Rhenogran TMTD-80	1.0 - 1.5 phr

Application: articles resistant to reversion based on NR, such as tyre carcasses and age-resistant articles based on SBR, NBR and EPDM

Packing	25 kg paper bags
Storage stability	In original closed containers under cool and dry conditions max. 6 months.
Handling	Consult material safety data sheet (MSDS) for additional handling information on Rhenogran DTDM-80.

® = registered trade mark

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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.

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