

## Rhenocure® 576

Specialty and Standard Chemicals

### Function

Rhenocure® 576 is a vulcanization accelerator for NR, SBR, BR and NBR, mainly used at low temperatures.

### Product description

Composition: butyraldehyde aniline condensation product

Appearance: amber colored liquid

Density (at 20 °C): approximately 0.995 g/cm<sup>3</sup>

Property	Nominal value	Unit	Test method
Refractive index at 20 °C	1.570 ± 0.020	---	DIN 51 423
Content of nitrogen	7.0 ± 0.5	%	Elementary analysis

### Use

Application: Rhenocure® 576 is a vulcanization accelerator for NR, SBR, BR and NBR. Rhenocure® 576 is mainly used in articles which are vulcanized at lower temperatures (140 °C up to room temperature). This is often the case in goods with a high cross section and which are consequently slow to warm up. Examples are dock fenders and truck tire retread cushion compounds. At normal vulcanization temperatures short scorch times must be accepted.

For self vulcanizing compounds or solutions based on CR or HIR, Rhenocure® 576 is used in combination with litharge and Rhenogran® DPTU.

Rhenocure® 576 accelerator is not recommended for use in light-colored vulcanizates and articles coming in contact with foodstuff.

Processing: Rhenocure® 576 gives short scorch times and relatively long cure times. The time to optimum vulcanization is long in relation to the flow time. At concentrations twice as high as those at which sulfenamide accelerators are used Rhenocure® 576 gives roughly the same degree of crosslinking. The vulcanization plateau is narrow. Like other aminic accelerators, the product causes reversion in NR compounds. It is not suitable for low sulfur cures. Rhenocure® 576 has a strong secondary accelerating effect on mercapto, sulfenamide and thiuram accelerators.

The action of Rhenocure® 576 is retarded by stearic acid, Vulkalent® B/C or other acidic chemicals. As a liquid, Rhenocure® 576 is easily dispersed in compounds.

Dosage:

Typical levels of addition based on 100 parts by weight of elastomer are:

<b>NR</b>	solid tires	0.6 - 0.9	Rhenocure® 576
		0.1 - 0.5	Rhenocure® D/EG-C
		3.2 - 3.4	sulfur
	dock fenders	1.0 - 1.5	Rhenocure® 576
		2.5 - 4.5	sulfur
	ebonite linings	1.2 - 3.0	Rhenocure® 576
			(without zinc oxide)
		30.0 - 50.0	sulfur
<b>SBR</b>	ebonite linings	1.2 - 3.0	Rhenocure® 576
			(without zinc oxide)
		30.0 - 50.0	sulfur
<b>CR</b>	self vulcanizing compounds	2.0 - 8.0	Rhenocure® 576
		5.0	zinc oxide
		4.0	magnesium oxide
		20.0	litharge
<b>NBR</b>	solvent resistant ebonite	0.8	Rhenocure® 576
		2.0	light magnesium oxide
		32.0	(no zinc oxide) sulfur

Vulcanizate Properties: Vulcanizates produced with Rhenocure® 576 have poor resistance to ageing unless they are protected by suitable chemical antioxidants. Rubber goods cured with Rhenocure® 576 exhibit high tensile strength and resilience.

Rhenocure® 576 stains vulcanizates that are exposed to light; its use is therefore restricted to dark colored goods. The articles have a characteristic odor and taste.

## Packaging

50 kg metal canister on 400 kg skid or 200 kg rolling channel drum on 800 kg skid.

## Storage stability

In original closed containers under cool (approximately 25 °C) and dry conditions 730 days from date of production.

## Handling

For additional handling information on Rhenocure® 576 please consult current safety data sheet.

These raw material properties are typical and, unless specifically indicated otherwise, are not to be considered as delivery specification.

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