

## Rhenogran® ZMMBI-50

Predispersed rubber chemicals and additives

### Function

Non-staining antioxidant for vulcanizates based on natural and synthetic rubber

### Product description

|                           |   |
|---------------------------|---|
| Composition:              | 50 % zinc methyl-2-mercaptobenzimidazole<br>50 % elastomer binder and dispersing agents |
| Appearance:               | beige granules  |
| Density, 20 °C:           | approx. 1.15 g/cm <sup>3</sup>  |
| Physiological properties: | see safety data sheet   |

### Use

**Mode of action:** Rhenogran ZMMBI-50 is usually non-staining and affords good protection against oxidation and the consequences of overcure to vulcanizates produced with ultra accelerators, such as dithiocarbamates and thiurams. It gives somewhat less protection to vulcanizates produced with other accelerators. To vulcanizates produced without sulfur but with a fairly large amount of thiuram it gives very good resistance to steam and, when used together with TMQ to hot air also.

The efficacy of combinations of Rhenogran ZMMBI-50 with other antioxidants is greater than the added effects of the ingredients when they are used separately. The effects of the combinations are therefore synergistic and provide also an outstanding protection from rubber poisons. The protective effects of Rhenogran ZMMBI-50 are very similar to those of the chemically related products MMBI, MBI, and ZMBI.

**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:** Calculated on 100 phr rubber

- usual amount: 1-3 phr
- for transparent goods: 0.6-0.8 phr
- for heat resistant thiuram vulcanizates: 3-6 phr
- for protection of vulcanizates from rubber poisons
- usually non-staining: 0.8-2 phr combination of Rhenogran ZMMBI-50 and Rhenogran BPH-80/L (1:1)
- staining: 0.8-2 phr combination of Rhenogran ZMMBI-50 and IPPD or 0.8-2 phr combination of Rhenogran ZMMBI-50 and 6PPD (1:1)

**Application:** Suitable for compounds based on natural rubber or synthetic rubber of the types SBR, IR, SBR, and NBR. Suitable for transparent, white and colored rubber goods, e.g. home and leisure articles, fabric proofings, toys. Used with thiuram, but little or no sulfur, for goods which must withstand heat.

### **Packing**

20 kg carton on 8/00 kg skid

### **Storage stability**

In original closed containers under cool and dry conditions 730 days from date of production

### **Handling**

For additional handling information on Rhenogran ZMMBI-50 please consult current safety data sheet.

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