

Technical Information

TEGOSIL® Heatban Series for HCR

TEGOSIL® Heatban Series for HCR includes the products TEGOSIL® Heatban 100, TEGOSIL® Heatban 110 and TEGOSIL Heatban 200, which are heat stabilizers for cured silicone elastomers and in particular used for high consistency rubber. The TEGOSIL® Heatban Series protects the compound specific properties from thermal degradation up to 300 °C.

Application

TEGOSIL® Heatban 100, 110 and 200 are suitable for a variety of peroxide and platinum cured rubber materials for industrial articles and consumer goods. Due to the viscosity (pasty) the materials can be easily incorporated in HCR.

TEGOSIL® Heatban added to the silicon elastomer compound gives a safety heat protection up to 300 °C. Even long-term heat protection at 300 °C up to 30 days can be achieved, in particular by TEGOSIL Heatban 200.

The TEGOSIL® Heatban series for HCR is in general also suitable for LSR. However, the products will be supplied as lower viscose versions available on request. Dosage recommendations will be given together with the samples since it depends on the required viscosity of the material to be applicable in the chosen process.

Properties

The mechanical properties of a typical black colored 50 Shore A HCR compound cured with 1.5 % of 2,4 dichlorobenzoyl peroxide (50 % active content) containing TEGOSIL® Heatban are illustrated in the diagram on the following page.

Dosage

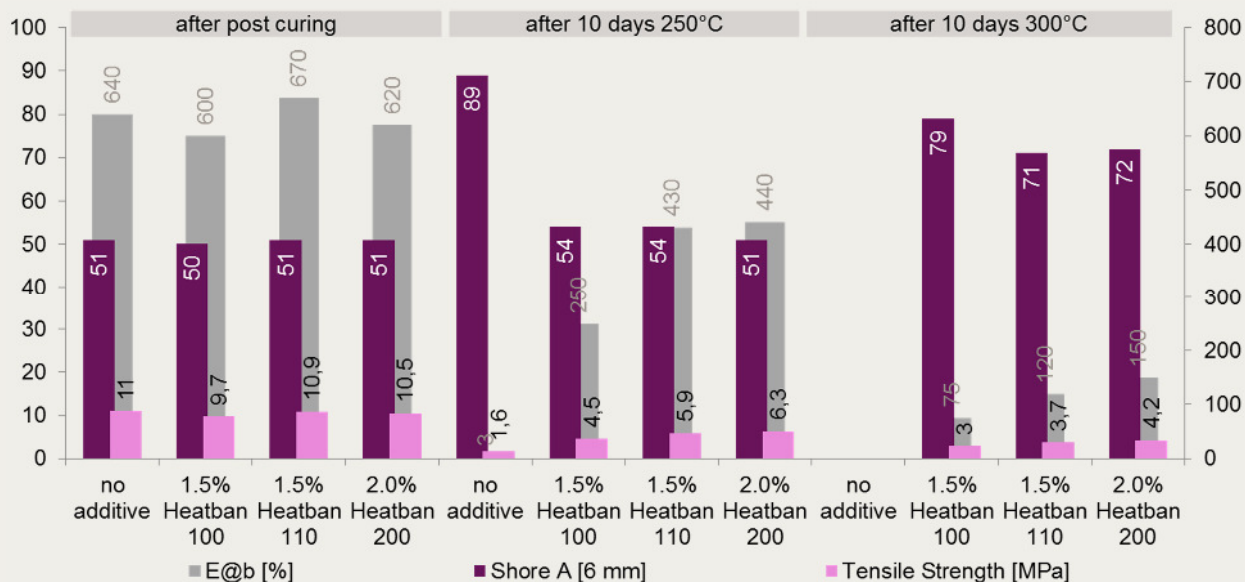
TEGOSIL® Heatban grades can be used on the double roll mill, during compounding or in a kneader. A good distribution of the product is required

The dosage recommended for a first trial is given in the table below. It varies depending on the TEGOSIL® Heatban grade. Furthermore, a standard dosage range is given, respectively.

Vulcanisation conditions

5 min. at 116 °C. Post curing: 4 h at 200 °C.
Thermal aging: 10 days at 250 °C or 300 °C.

	TEGOSIL® Heatban 100	TEGOSIL® Heatban 110	TEGOSIL® Heatban 200
Appearance			
Form	creamy paste	creamy paste	high viscous paste
Color	white	off white	brownish
Density	~ 1.00 g/cm ³	~ 1.23 g/cm ³	~ 1.00 g/cm ³
Dosage/Recommendation			
Standard dosage	1.2. – 2.0 %	1.3 – 2.0 %	2.0 – 3.0 %
Dosage for 1 st trial	1.5 %	1.5 %	2.0 %
Transparent HCR	suitable	suitable	–
Colored HCR	suitable	suitable	suitable



Food contact status

BfR XV

TEGOSIL® Heatban Series for HCR complies with BfR-Recommendation XV – Silicones, III. Silicone elastomers (rubber); the silicone elastomers must release no more than 0.5 % volatile organic and no more than 0.5 % extractable components. The finished products must not test positively for peroxides.

There is no harmonized EU-legislation for silicones. Information concerning other national regulations can be given on request.

FDA

TEGOSIL® Heatban Series for HCR may be used in accordance with 21 C.F.R. § 177.2600, Indirect Food Additives: Polymers, Rubber articles intended for repeated use

Registration

TEGOSIL® Heatban 100, TEGOSIL® Heatban 110 and TEGOSIL Heatban 200 are listed in the following chemical inventories:

EINECS, TSCA, DSL, ENCS, AICS, ECL, PICCS, IECSC, NZIOC, NECSI

Based on the submitted information of our raw material suppliers we can confirm, that TEGOSIL® Heatban Series for HCR is compliant with EC Regulation 1907/2006 (REACH).

Storage Stability

TEGOSIL® Heatban grades are stable for minimum 24 months in original packaging at a temperature below 30 °C.

Packaging

20 kg plastic drum

Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transport and for dangerous substances
- protective measures for storage and handling
- measures in case of accidents and fire
- toxicity and ecological effects

is given in our material safety data sheets.

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