

Silplus™ 60 CW

Heat Cured Elastomer

Description

Silplus 60 CW is a heat cured silicone rubber base compound. It is an excellent candidate to consider for use in the cable and wire industry.

Key Features and Typical Benefits

- excellent processing (high green strength)
- good mechanical profile
- very good electrical properties
- enhanced high temperature resistance

Typical Physical Properties

Typical Properties of the Uncured Base Compound			
Appearance			Translucent
Density	DIN 53 479 A	g/cm ³	1.20
Mooney Viscosity	DIN 53 523		
ML (4) 25°C		ME	58
Δ ML 0/ML4			≤20

Typical Properties of the Vulcanized Rubber

100 (pbw) Silplus 60 CW heat cured silicone with 1.5 pbw bis-(2,4-dichlorobenzoyl)-peroxide (50%).

Vulcanization conditions: 10 min. @ 120°C.

Hardness	DIN 53 505	Shore A	63
Tensile Strength	DIN 53 504 S2	N/mm ²	11
Elongation at Break	DIN 53 504 S2	%	500
Tear Strength	ASTM D 624 die B	N/mm	24
Volume Resistivity	DIN IEC 93	Ohm•cm	1•10 ¹⁵
Dielectric Strength	IEC 243-1	kV/mm	25
Dielectric Constant	IEC 250	(50 Hz)	3.1
Dissipation Factor	IEC 250	(tan delta/1000 Hz)	2.6•10 ⁻⁴

Typical properties are average data and are not to be used as or to develop specifications.

Attention:

Using a peroxide other than bis-(2,4-dichlorobenzoyl)-peroxide (50%), might result in different mechanical properties.

Diacyl-peroxides like Di(2,4-dichlorobenzoyl)peroxide are non vinyl specific cross link peroxides (higher cross link density).

Diaryl-peroxides like Dicumylperoxide or Dialky-peroxides like 2,5-Dimethyl-2,5-di(tert. butylperoxy)hexane are vinyl specific cross link peroxides (lower cross link density).

Processing Recommendations

Various organic peroxides will vulcanize the compounding bases. Fabricators should select a curing agent based on the method of fabrication, desired properties and safety considerations. They are mixed into the rubber on a two-roll-mill, together with additives if necessary.

If the goods are to be vulcanized without pressure, e.g. in hot air or in an infrared radiation tunnel, bis-2,4-dichlorobenzoyl-peroxide (50%) is usually recommended. The dosage ranges from 1-2 parts (pbw) of cross-linking agent on 100 parts (pbw) of base compound. Good results have been achieved with a dosage of 1.5 parts (pbw). While

the cross-linking agent is being incorporated, the temperature of the compound should not exceed 40°C to avoid scorch. Therefore the rolls of the mixing mill should always be well cooled.

Regulatory Compliance

- Listed as UL 94 HB (file No. E205753)

Packaging

Silplus 60 CW heat cured silicone is available in 500 kg boxes.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at www.momentive.com or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

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