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Silplus* 60 CW

(formerly Silopren* HV 2/2160)

Product 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/cc	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	44
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

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 Dialkyl-peroxides like 2,5-Dimethyl-2,5-di(tert.butylperoxy)hexan are vinyl specific cross link peroxides (lower cross link density).

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Momentive Performance Materials provides versatile materials as the starting point for our creative approach to ideas that help enable new developments across hundreds of industrial and consumer applications. We are helping customers

solve product, process, and performance problems; our silanes, fluids, elastomers, sealants, resins, adhesives, urethane additives, and other specialty products are delivering innovation in everything from car engines to biomedical devices.

From helping to develop safer tires and keeping electronics cooler, to improving the feel of lipstick and ensuring the reliability of adhesives, our technologies and enabling solutions are at the frontline of innovation.

Regulatory Compliance

- Listed as UL 94 HB (file No. E224733)

Potential Applications

Because of its outstanding properties, Silplus 60 CW heat cured silicone is an excellent candidate to consider for use in various types of cable and wire applications.

Packaging

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

Instructions for Use

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.

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 considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at www.momentive.com or, upon request, from any Momentive Performance Materials representative. Use of other materials in conjunction with Momentive Performance Materials 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.

Emergency Service

Momentive Performance Materials maintains an around-the-clock emergency service for its products. The American Chemistry Council (CHEMTREC) and CareChem24 International also maintain an around-the-clock emergency service for all chemical products:

Location	Momentive Performance Materials Products	All Chemical Products
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Alaska, Hawaii	518.233.2500	CHEMTREC: 800.424.9300
Canada	518.233.2500	CHEMTREC: 800.424.9300
Europe	+518.233.2500 (Albanian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovak, Spanish, Swedish, Turkish, Ukrainian)	+44.(0)208.762.8322 (UK)
Middle East, All countries, except Israel	+518.233.2500	+961.3.487.287 (Lebanon)
Middle East, Israel	+518.233.2500	+44.(0)208.762.8322 (UK)
Latin America, Asia/Pacific, all other locations worldwide	+518.233.2500	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact Momentive Performance Materials at 518.233.2500 or CHEMTREC at 800.424.9300.	

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

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