



MOMENTIVE

performance materials

The science behind the solutions.

Silplus* 60 CW

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	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 data are average data and actual values may vary. Typical data shall not be used as product 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).

*Silplus is a trademark of Momentive Performance Materials Inc.

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. E205753)

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
Mainland U.S., Puerto Rico	518.233.2500	CHEMTREC: 800.424.9300
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.

CUSTOMER SERVICE CENTERS

North America	E cs-na.silicones@momentive.com		
	<ul style="list-style-type: none"> • Specialty Fluids • UA, Silanes and Specialty Coatings • RTVs and Elastomers • Consumer Sealants & Construction Sealants and Adhesives 	<p>T +1.800.523.5862</p> <p>T +1.800.334.4674</p> <p>T +1.800.332.3390</p> <p>T +1.877.943.7325</p>	<p>F +1.304.746.1654</p> <p>F +1.304.746.1623</p> <p>F +1.304.746.1623</p> <p>F +1.304.746.1654</p>
Latin America	E cs-la.silicones@momentive.com		
	<ul style="list-style-type: none"> • Argentina & Chile • Brazil • Mexico & Central America • Venezuela, Ecuador, Peru Colombia & Caribbean 	<p>T +54.11.4862.9544</p> <p>T +55.11.4534.9650</p> <p>T +52.55.2169.7670</p> <p>T +58.212.285.2149</p>	<p>F +54.11.4862.9544</p> <p>F +55.11.4534.9660</p> <p>F +52.55.2169.7699</p> <p>F +58.212.285.2149</p>
Europe, Middle East, Africa and India	E cs-eur.silicones@momentive.com	<p>T +00.800.4321.1000</p> <p>T +31.164.225350</p>	
Pacific	E cs-ap.silicones@momentive.com	<p>T +1.800.820.0202</p> <p>T +0.81.276.20.6182</p>	<p>F +81.276.31.6259</p>
Worldwide Hotline		<p>T +1.607.786.8131</p> <p>T +1.800.295.2392</p>	<p>F +1.607.786.8309</p>
Visit us at Momentive.com			

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC., MOMENTIVE PERFORMANCE MATERIALS USA INC., MOMENTIVE PERFORMANCE MATERIALS ASIA PACIFIC PTE. LTD., MOMENTIVE PERFORMANCE MATERIALS WORLDWIDE INC., MOMENTIVE PERFORMANCE MATERIALS GmbH, THEIR SUBSIDIARIES AND AFFILIATES DOING BUSINESS IN LOCAL JURISDICTIONS (collectively "SUPPLIERS"), ARE SOLD BY THE RESPECTIVE LEGAL ENTITY OF THE SUPPLIER SUBJECT TO SUPPLIERS' STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIERS MAKE NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SUPPLIERS' PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. AFOREMENTIONED EXCLUSIONS OR LIMITATION OF LIABILITY ARE NOT APPLICABLE TO THE EXTENT THAT THE END-USE CONDITIONS AND/OR INCORPORATION CONDITIONS CORRESPOND TO THE RECOMMENDED CONDITIONS OF USE AND/OR OF INCORPORATION AS DESCRIBED BY SUPPLIER IN ITS PRODUCT DATA SHEET AND/OR PRODUCT SPECIFICATIONS. EXCEPT AS PROVIDED IN SUPPLIERS' STANDARD CONDITIONS OF SALE, SUPPLIERS AND THEIR REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.

Each user bears full responsibility for making its own determination as to the suitability of Suppliers' materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Suppliers' products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Suppliers' Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Suppliers. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Suppliers or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.