



# MOMENTIVE

performance materials

The science behind the solutions.

## Silplus\* 40 MP

### Product Description

Silplus 40 MP is a heat cured elastomer with outstanding processing capability. Silplus 40 MP heat cured elastomer when properly compounded and catalyzed may be considered for use in a wide variety of applications such as extrusion, molding and calendaring.

### Key Features and Typical Benefits

- Compounding simplicity
- Good extrudability
- High mechanical properties
- Good green strength
- Easily blendable
- Versatile

### Typical Physical Properties

#### Typical Properties of the Uncured Base Compound

Appearance			Translucent
Density, 20°C	DIN 53 479 A	g/cm <sup>3</sup>	1.11
Mooney Viscosity	DIN 53 523		
ML (4) 25°C		ME	25
Δ ML 0/ML4		ME	≤ 20

#### Typical Properties of the Vulcanized Rubber

100 pbw. Silplus 40 MP heat cured elastomer with 1.5 pbw bis-(2,4-dichlorobenzoyl)-peroxide (50%).  
Vulcanization conditions: 10 min. @ 125°C. Post cured: 4h @ 200°C.

Hardness	DIN 53 505	Shore A	42
Tensile Strength	DIN 53 504 S2	N/mm <sup>2</sup>	9
Elongation at Break	DIN 53 504 S2	%	560
Tear Strength	ASTM D 624 die B	N/mm	17

#### Typical Properties of the Vulcanized Rubber

100 (pbw) Silplus 40 MP heat cured elastomer with 0.4 (pbw) like  
2,5-Dimethyl-2,5-di(tert.butylperoxy)hexan (100%).  
Vulcanization conditions: 10 min. @ 170°C.

Hardness	DIN 53 505	Shore A	36
Tensile Strength	DIN 53 504 S2	N/mm <sup>2</sup>	9
Elongation at Break	DIN 53 504 S2	%	750
Tear Strength	ASTM D 624 die B	N/mm	17
Compression Set (22 h @ 175°C)	ISO 815	%	18

\*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

- The ingredients are listed in the BfR recommendation XV "Silicones"<sup>(1)</sup>
- Compositionally compliant with 21 CFR 177.2600 - Rubber articles intended for repeated use<sup>(2)</sup>
- Testing for compliance with other regulations is in progress

(1) Producer of the final article needs to test and confirm that the final product meets the extraction limits of BfR XV or corresponding EU legislation.

(2) It is the responsibility of the user to determine that the final product complies with the extractive limitations and other requirements of 21 CFR 177.2600 under their specific manufacturing procedures.

## Potential Applications

Because of its outstanding properties, Silplus 40 MP heat cured elastomer is an excellent candidate to consider for use in most types of molding, extrusion and calendaring applications.

## Packaging

Silplus 40 MP heat cured elastomer 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 mixer or mill should always be well cooled.

To vulcanize goods in a press or in steam, dicumyl peroxide (95%) or 2,5-Dimethyl-2,5-di(tert.butylperoxy)hexan is generally recommended. Dicumyl peroxide crystals need to be melted in the rubber to become homogeneous and effective.

## 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](http://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

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• RTVs and Elastomers	T +1.800.332.3390	F +1.304.746.1623
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