Technical Data Sheet

Silplus™ 60 HS

Heat Cured Elastomer

Description

Silplus 60 HS is a heat cured elastomer with very good mechanical and processing properties. Silplus 60 HS when properly compounded and catalyzed can be considered for use in a wide variety of applications such as extrusion, molding and calendaring.

Key Features and Typical Benefits

- excellent mechanical properties, in particular, high tear strength
- compounding simplicity
- good dielectric properties
- enhanced heat resistance
- versatile

Typical Physical Properties

Typical Physical Properties of the Uncured Base Compound			
Appearance			Translucent
Density, 23°C	DIN 53 479 A	g/cm^3	1.16
Mooney Viscosity	DIN 53 523		
ML (4) 25°C		ME	39
Δ ML 0/ML4		ME	≤ 20

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Typical Properties of the Vulcanized Rubber			
100 (pbw) Silplus 60 HS with 0.25 (pbw) like 2,5-Dimethyl-2,5-di(tert.butylperoxy)hexane (100%). Vulcanization conditions: 10 min. @ 170°C, 4h @ 200°C.			
Hardness	DIN 53 505	Shore A	60
Tensile Strength	DIN 53 504 S2	N/mm^2	12.5
Elongation at Break	DIN 53 504 S2	%	700
Tear Strength	ASTM D 624 die B	N/mm	40
Compression Set (22 h @ 175°C)	ISO 815	%	20

Typical Properties of the Vulcanized Rubber			
100 (pbw) Silplus 60 HS with 1.2 (pbw) bis-(2,4-dichlorobenzoyl)-peroxide (50%). Vulcanization conditions: 10 min. @ 120°C. Post cured: 4h @ 200°C.			
Hardness	DIN 53 505	Shore A	58
Tensile Strength	DIN 53 504 S2	N/mm^2	10
Elongation at Break	DIN 53 504 S2	%	550
Tear Strength	ASTM D 624 die B	N/mm	35

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

Potential Applications

Because of its outstanding properties, Silplus 60 HS heat cured silicone is an excellent candidate to consider for use in most types of molding, extrusion and calendaring applications.

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

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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 1.2 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)hexane is generally recommended. Dicumyl peroxide crystals need to be melted in the rubber to become homogeneous and effective.

Regulatory Compliance

FDA:

Compositionally Compliant with the requirements of 21 CFR 177.2600 – Rubber articles intended for repeated use and have been found, through testing of a representative sample, to meet the extractives limitations in 21 CFR 177.2600(e) and/or (f). - Note a

Biocompatibility:

A representative sample of Silplus 60 HS heat cured elastomer has passed USP Class VI (United State Pharmacopeia 32, National Formulary 27, 2009. <88> Biological Reactivity Test, In Vivo tests) and ISO 10993 (Part 6, 10, and 11) tests using Good Laboratory Practices (GLP). - Note b.

Note a: 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.

Note b: Please contact Product Stewardship and Regulatory Group for details.

Packaging

Silplus 60 HS is heat cured elastomer available in 500 kg boxes.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant

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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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