

ELASTOSIL® VARIO

RTV-2 silicone rubber / modular system

License plate

Pourable, addition-curing two-component silicone rubber that vulcanizes at room temperature.

Special features

- two base components, two catalysts
- good workability due to low viscosity
- Fast, shrink-free vulcanization at room temperature, which can be adjusted over a wide range
- Variable Shore A hardness (approx. 15 - 40)

- high elasticity, high tear resistance and excellent tear propagation resistance
- transparent colorless vulcanizate
- Can be colored with 1 - 4 % ELASTOSIL® Color pastes FL

Application

- Encapsulation of electrical and electronic components
- Coatings
- Production of technical molded parts using the casting process
- Impression

Product data (unvulcanized)

Feature	Test method	Unit	Value	
			VARIO 15	VARIO 40
Color			translucent	translucent
Density at 23 °C		[g/cm³]	1.06	1.15
Viscosity at 23 °C, stirred	ISO 3219	[mPa s]	5 ,000	15.000

Product data (catalyzed with ELASTOSIL® catalyst VARIO or VARIO-F)

Feature	Test method	Unit	Value	
			VARIO 15	VARIO 40
Mixing ratio		[Parts by weight]	10 : 1	10 : 1
Viscosity at 23 °C	ISO 3219	[mPa s]	3.000	10.000
Pot life (23 °C, up to 100,000 mPa s)	Catalytic converter VARIO	[min]		150
	Catalytic converter VARIO-F			2
Vulcanization time, tack-free	VARIO catalytic converter	[h]		6
	Catalytic converter VARIO-F	[min]		15

Product data

Feature	Test method	Unit	Value	
			VARIO 15	VARIO 40
Density at 23 °C, in water	ISO 2781	[g/cm³]	1.06	1 .15
Shore A hardness	ISO 868		15	40
Tear resistance	ISO 37	[N/mm²]	6.5	8
Elongation at break	ISO 37	[%]	900	450
Tear resistance	ASTM D 624 B	[N/mm]	15	15
Linear shrinkage		[%]	< 0.1	< 0.1

Vulcanizate after 24 h at 23 °C.

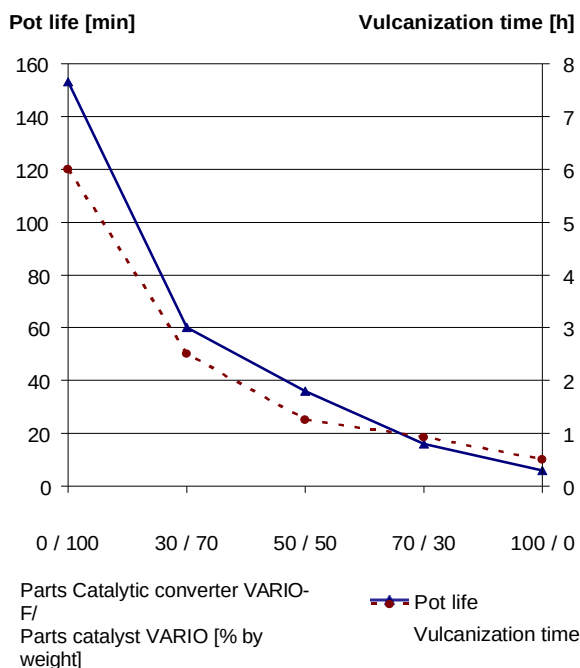
Processing

Important note

ELASTOSIL® catalyst VARIO and VARIO F contain the platinum catalyst.

The basic components ELASTOSIL® VARIO 15 and ELASTOSIL® VARIO 40 can be mixed with each other in any ratio, allowing any desired Shore A hardness between approx. 15 and 40 to be set.

Mixing the catalysts ELASTOSIL® Catalyst VARIO and VARIO-F results in pot lives of between 2 and 150 minutes and demolding times of between 15 minutes and 6 hours. The following table shows the processing and vulcanization times for different mixing ratios.



The user must determine the optimum conditions for the respective application by carrying out his own tests. Please refer to the information sheet "Wacker RTV-2 silicone rubber - processing".

Coloring

The processor can stir in 1-4 % by weight of ELASTOSIL® color pastes FL, preferably into the base components.

Please refer to the information sheet "ELASTOSIL® Color pastes FL".

Storage

The components of the ELASTOSIL® VARIO modular system should be stored between 5 °C and 30 °C in tightly closed original containers. The best-before date for each batch is indicated on the product label.

Safety instructions

The components of the addition-curing building kit system ELASTOSIL® VARIO only contain components which, according to many years of experience, have proven to be neither toxic nor aggressive, which is why special precautionary measures are not necessary when handling them and the general occupational hygiene regulations are sufficient.

Detailed information can be found in the respective safety data sheets. These can be requested from our sales companies.

Reference information

Please send orders in Switzerland to:

Ameba AG

Immengasse 21

4056 Basel
Phone 061 322 42 24
Fax 061 322 42 29

www.ameba.ch

The data provided in this data sheet corresponds to the current status. This does not release the customer from the obligation to carry out careful incoming inspections in individual cases. We reserve the right to make changes to the product data as a result of technical progress or operational developments. The recommendations given in this data sheet require our own tests and trials due to factors beyond our control during processing, especially when using third-party raw materials. Our recommendations do not release you from the obligation to check and, if necessary, eliminate any infringement of third-party property rights yourself. Suggestions for use do not constitute a guarantee of suitability for the recommended purpose.

Management system certified according to DIN EN ISO 9001 and DIN EN ISO 14001

WACKER

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Version 1.00 from 07-11-12

Please direct all technical questions concerning quality and product safety to:

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WACKER-SILICONES
Hanns-Seidel-Platz 4
D-81737 Munich

www.wacker.com
silicones@wacker.com

ELASTOSIL® VARIO 15 - 40

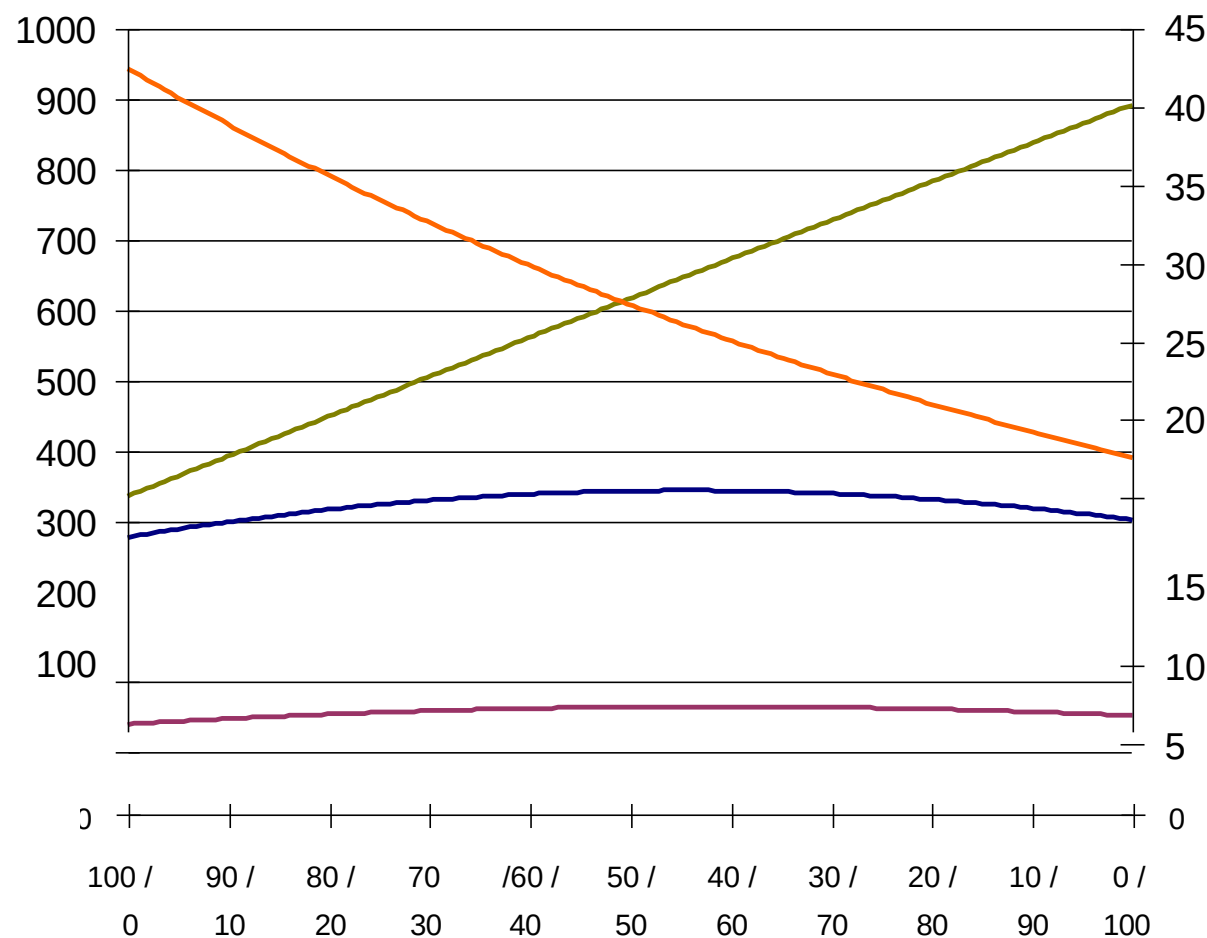
HIGH MECHANICAL PROPERTIES OVER THE ENTIRE MIXING RANGE

- Elongation at break [%]

- Hardness Shore A

- Tear resistance [N/mm]

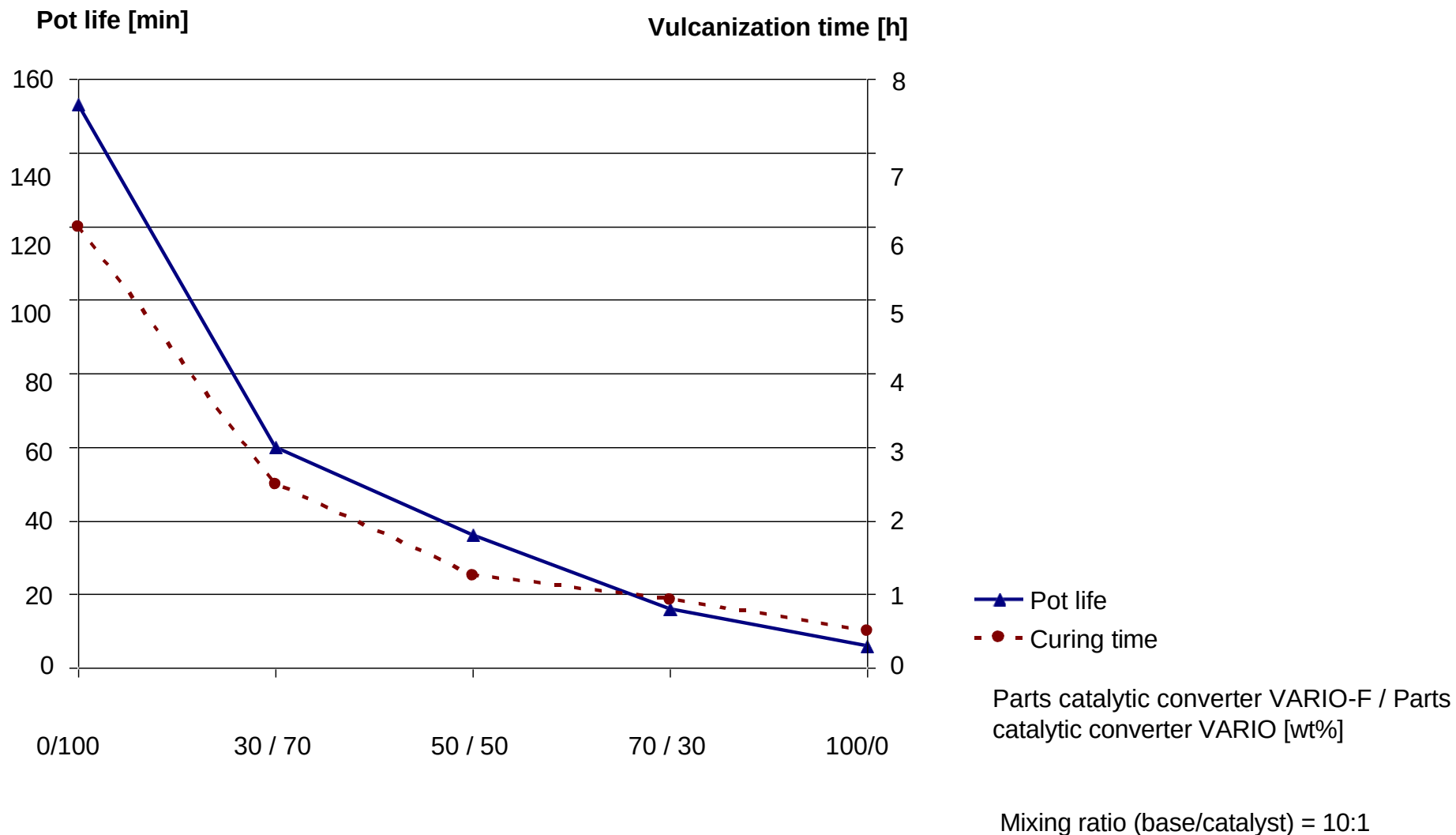
- Tensile strength [N/mm²]



- Elongation at break [%]
- Hardness Shore A
- Tear resistance [N/mm]
- Tensile strength [N/mm²]

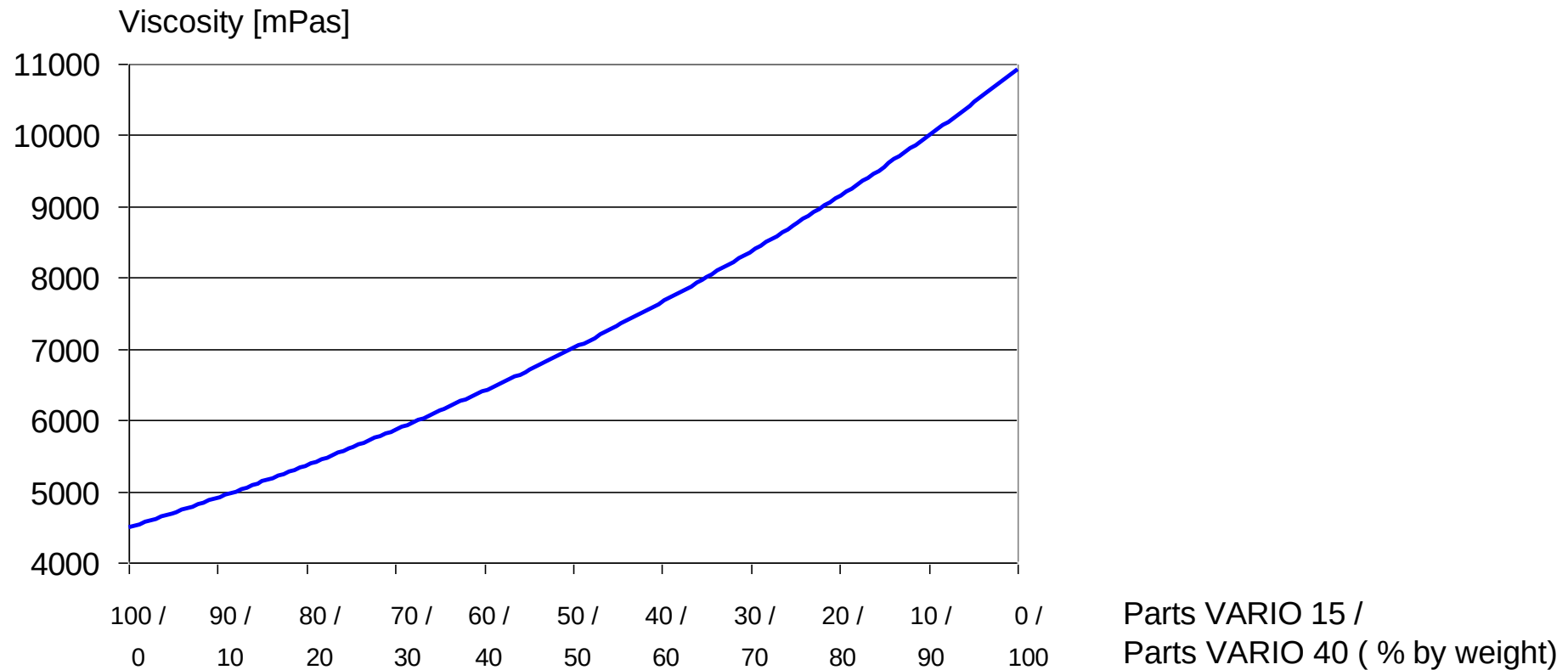
Parts VARIO 15 /
Parts VARIO 40 (% by weight)

ELASTOSIL® VARIO CUSTOMIZED REACTIVITY



ELASTOSIL® VARIO

LOW VISCOSITY - EXCELLENT FLOWABILITY





Statement on Suitability for use under Food Contact Regulations

for

ELASTOSIL® VARIO 15

1. Europe:

Due to lack of specific European legislation on Silicones, these materials are subject to the Framework Regulation (EC) No. 1935/2004 and national provisions (Article 6). Provided appropriate processing, **ELASTOSIL® VARIO 15** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are suitable for the manufacture of food contact materials and articles under article 3 of the before mentioned Regulation. Compliance with the requirements of Regulation (EC) No.1935/2004 for the food contact material or article concerning any limitations in particular max. use limits or limits on migration or extraction, the effect on taste and smell of the food and the suitability of the article for the specific use must be ensured by the producer of the food contact material or article as it is placed on the market.

2. Germany: Compliance with the Recommendations of the BfR:

The ingredients of **ELASTOSIL® VARIO 15** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are in compliance with the positive lists of the Recommendation XV Silicones of the BfR.

Limitations: Extractable substances and volatiles may not exceed 0.5%.

3. France:

The ingredients of **ELASTOSIL® VARIO 15** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are in compliance with the Arrêté du 25 novembre 1992.

Limitations: Total migration may not exceed 60 mg/kg food or food simulant, respectively, and volatiles are limited to 0.5%.

4. USA: Compliance with FDA 21 CFR:

The ingredients of **ELASTOSIL® VARIO 15** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are in compliance with 21 CFR §177.2600 Rubber articles intended for repeated use and §175.300 Resinous and Polymeric Coatings.

Limitations: §177.2600 Rubber articles intended for repeated use:

Rubber articles intended for use with dry food are so formulated and cured under conditions of good manufacturing practice as to be suitable for repeated use.

Rubber articles intended for repeated use in contact with aqueous food shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with distilled water at reflux temperature, shall yield total

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extractives not to exceed 20 milligrams per square inch during the first 7 hours of extraction, nor to exceed 1 milligram per square inch during the succeeding 2 hours of extraction.

Rubber articles intended for repeated use in contact with fatty foods shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with n-hexane at reflux temperature, shall yield total extractives not to exceed 175 milligrams per square inch during the first 7 hours of extraction, nor to exceed 4 milligrams per square inch during the succeeding 2 hours of extraction.

Limitations: §175.300 Resinous and Polymeric Coatings:

The final food contact coating in its cured state has to meet the extractive limitations under 175.300 (c).

Please note that due to its high platinum content, **ELASTOSIL® KAT VARIO-F** is limited to a maximum use level of 10%.

Regulatory sanctioning of the ingredients in a product does not imply that the finished product manufactured from those ingredients is considered safe by regulatory bodies. Responsibility to meet extraction or migration limits subject to the a.m. regulations resides with the manufacturer of the finished product.

Wacker-Chemie AG

Burghausen, October 29, 2012

A handwritten signature in dark ink, appearing to read "C. Burger", with a long, sweeping horizontal line extending to the right.

Dr. C. Burger
GB-S-IMS Manager Product Stewardship 1

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Statement on Suitability for use under Food Contact Regulations

for

ELASTOSIL® VARIO 40

1. Europe:

Due to lack of specific European legislation on Silicones, these materials are subject to the Framework Regulation (EC) No. 1935/2004 and national provisions (Article 6). Provided appropriate processing, **ELASTOSIL® VARIO 40** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are suitable for the manufacture of food contact materials and articles under article 3 of the before mentioned Regulation. Compliance with the requirements of Regulation (EC) No.1935/2004 for the food contact material or article concerning any limitations in particular max. use limits or limits on migration or extraction, the effect on taste and smell of the food and the suitability of the article for the specific use must be ensured by the producer of the food contact material or article as it is placed on the market.

2. Germany: Compliance with the Recommendations of the BfR:

The ingredients of **ELASTOSIL® VARIO 40** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are in compliance with the positive lists of the Recommendation XV Silicones of the BfR.

Limitations: Extractable substances and volatiles may not exceed 0.5%.

3. France:

The ingredients of **ELASTOSIL® VARIO 40** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are in compliance with the Arrêté du 25 novembre 1992.

Limitations: Total migration may not exceed 60 mg/kg food or food simulant, respectively, and volatiles are limited to 0.5%.

4. USA: Compliance with FDA 21 CFR:

The ingredients of **ELASTOSIL® VARIO 40** and its catalyst batches **ELASTOSIL® KAT VARIO** or **ELASTOSIL® KAT VARIO-F** are in compliance with 21 CFR §177.2600 Rubber articles intended for repeated use and §175.300 Resinous and Polymeric Coatings.

Limitations: §177.2600 Rubber articles intended for repeated use:

Rubber articles intended for use with dry food are so formulated and cured under conditions of good manufacturing practice as to be suitable for repeated use.

Rubber articles intended for repeated use in contact with aqueous food shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with distilled water at reflux temperature, shall yield total

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extractives not to exceed 20 milligrams per square inch during the first 7 hours of extraction, nor to exceed 1 milligram per square inch during the succeeding 2 hours of extraction.

Rubber articles intended for repeated use in contact with fatty foods shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with n-hexane at reflux temperature, shall yield total extractives not to exceed 175 milligrams per square inch during the first 7 hours of extraction, nor to exceed 4 milligrams per square inch during the succeeding 2 hours of extraction.

Limitations: §175.300 Resinous and Polymeric Coatings:

The final food contact coating in its cured state has to meet the extractive limitations under 175.300 (c).

Please note that due to its high platinum content, **ELASTOSIL® KAT VARIO-F** is limited to a maximum use level of 10%.

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