

# Silbione® RT GEL 4642 A&B

October 2017

## Soft Skin Adhesive Gel

**Description** **Silbione® RT GEL 4642 A&B** is a two component silicone elastomer that crosslinks at room temperature by polyaddition reaction. The polymerization can be accelerated by heat.  
The silicone material is delivered as two low viscous liquid components, which once mixed and cured, transform into an elastic and resistant gel. Polymerization occurs without formation of heat.

**Examples of applications**

- Scar care.
- Adhesive sheets in medical applications.

**Advantages**

- Very good adhesion on dry skin.
- Proven biocompatibility.
- Atraumatic removal.

**Characteristics** 1. **Characteristics of the uncured product**

<i>Properties</i>	Silbione® RT GEL 4642 A&B	
	A	B
<b>Contains</b>	Pt	SiH
<b>Appearance</b>	Low viscous liquid	
<b>Colour</b>	Transparent	
<b>Density (At 23°C, g/cm<sup>3</sup>, approx.)</b>	0.98	
<b>Viscosity (At 23°C, mPa, approx.)</b>	11 000	15 000

2. **Polymerization**

<i>Properties</i>	Silbione® RT GEL 4642 A&B
<b>Mixing Ratio A : B (Parts by weight)</b>	100 : 100
<b>Working Time (At 23°C, min, approx.)</b>	150
<b>Pot Life (At 40°C, min, approx.)</b>	30
<b>Mixing Viscosity (At 23°C, mPa, approx.)</b>	13 000

## Silbione® RT GEL 4642 A&B

Characteristics  
(cont')

### 3. Characteristics of the cured product

<i>Properties</i>	<b>Silbione® RT GEL 4642 A&amp;B</b>
<b>Penetration</b> ( <i>Hollow cone 62.5 g, DIN ISO 2137, mm/10, approx.</i> )	155
<b>Probe Tack</b> ( <i>Steel probe, 0.20 mm layer, mJ/cm<sup>2</sup>, approx.</i> )	12

**Remarks:** *Curing the silicone at elevated temperature has no influence on the final properties. Nevertheless, heating can alter the dimensions.*

*Due to the inherently weak structural network of silicone gels, mechanical properties cannot be measured on cured gels.*

*The data do not consist in establishing specifications.*

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## Processing

### 1. Mixing the two components

The components A and B are mixed by weight in the above indicated ratio. The mixing can be carried out either by hand or using a low-speed electric or pneumatic mixer to minimize the introduction of air and to avoid any temperature increase.

It is also possible to use a special mixing and dispensing machine for the two silicone components. Further information is available upon request.

### 2. Degassing

The mixture should be degassed preferably at 30 to 50 mbar to eliminate any entrapped air. If a dispensing machine is used, the two components are degassed separately prior to mixing. The silicone mixture expands to 3 to 4 times of its initial volume and bubbles rise to the surface. The bubbles progressively disappear and the mixture returns to its initial volume after 5 to 10 minutes. Wait a few minutes to complete the degassing and then flash the vacuum. The silicone is ready for pouring, either by gravity or under low pressure.

Note: Flashing the vacuum once or twice accelerates the degassing. It is recommended to use a container with a high diameter / height ratio.

### 3. Polymerization

The system polymerizes at 23°C. The curing may be slowed down at lower temperature or accelerated by heat.

Contact with certain materials can inhibit the crosslinking. See list below:

- natural rubbers vulcanized with sulphur,
- RTV 2 silicone elastomers catalyzed with metal salts, e.g. tin-compounds,
- PVC stabilized with tin salts and additives,
- epoxy resins catalyzed with amines,

In case of doubts, it is recommended to test the substrate by applying a small quantity of the mixed silicone on a restricted area.

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## Packaging

**Silbione® RT GEL 4642 A&B** components are delivered in 25 kg pails kit or 200 kg drums.

## Silbione® RT GEL 4642 A&B

### Storage and shelf life

When stored in its original packaging at a temperature of between -10°C and +40°C, **Silbione® RT GEL 4642 A&B** may be stored for up to 12 months from its date of manufacture.

Comply with the storage instructions and expiry date marked on the packaging.

Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.

### Bio-compatibility and Toxicity

After curing performed according the conditions described above, **Silbione® RT GEL 4642 A&B** complies with a number of regulations for Medical Devices.

Contact Elkem Silicones for more detailed information.

### Limitations

**Silbione®** silicone products may be used for healthcare applications in accordance with Elkem's healthcare product guidelines. Elkem Silicones supports the sales of these **Silbione®** silicone products to customers involved in manufacturing and assembling approved medical devices for less than 30-day implantation. The purchaser has the sole responsibility to select a particular **Silbione®** silicones product and determine its application suitability. The purchaser also has the sole responsibility to comply with all applicable statutory, regulatory and industry requirements and standards for compatibility, extractability, testing, safety, efficacy, and labeling.

### Safety

Please consult the Safety Data Sheet of **Silbione® RT GEL 4642 A&B**

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