

# Silbione® HC2 2031 A&B

October 2017

## Solventless Biocompatible Adhesives for Wound care

<b>Description</b>	<p><b>Silbione® HC2 2031 A&amp;B</b> is a two component silicone elastomer that crosslinks at room temperature by polyaddition reaction. The polymerization can be accelerated by heat.</p> <p>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.</p>
<b>Examples of applications</b>	<ul style="list-style-type: none"> <li>• Medical (&lt; 30 days implantable).</li> <li>• Adhesive wound dressings.</li> <li>• Adhesive sheets in medical applications.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Very good adhesion on dry skin.</li> <li>• No adhesion on moist wounds.</li> <li>• Proven biocompatibility.</li> <li>• No free oil.</li> </ul>

### Characteristics 1. Characteristics of the uncured product

Properties	Silbione® HC2 2031	
	A	B
<b>Contains</b>	Pt	SiH
<b>Appearance</b>	Low viscous liquid	
<b>Colour</b>	Transparent	
<b>Density</b> <i>At 23 °C, [g/cm³], approx.</i>	0.98	
<b>Viscosity</b> <i>At 23 °C, [mPa·s], approx.</i>	60000	50000

### 2. Polymerization

Properties	Silbione® HC2 2031 A&B
<b>Mixing Ratio A : B</b> <i>Parts by weight</i>	100 : 100
<b>Working Time</b> <i>At 23 °C, [min], approx.</i>	150
<b>Mixing Viscosity</b> <i>At 23 °C, [mPa·s], approx.</i>	55000

**3. Characteristics of the cured product**

Curing conditions: 60 minutes at 120°C

Properties	Silbione® HC2 2031 A&B
<b>Penetration</b> <i>Hollow cone (62,5 g), DIN ISO 2137, [mm/10], approx.</i>	170
<b>Probe Tack</b> <i>Steel probe, 0,25 mm layer, [mJ/cm<sup>2</sup>], approx.</i>	9.0

**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.*

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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 and contrary 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**





The silicone components of **Silbione® HC2 2031 A&B** are delivered in pails of 25 kg.

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**Silbione® HC2 2031 A&B**

<b>Storage and shelf life</b>	<p>When stored in its original packaging at a temperature of between -10°C and +30°C, <b>Silbione® HC2 2031 A&amp;B</b> may be stored for up to 12 months from its date of manufacture.</p> <p>Comply with the storage instructions and expiry date marked on the packaging.</p> <p>Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.</p>
<b>Bio-compatibility and Toxicity</b>	<p>Biocompatibility testing addresses the categories of evaluation for cytotoxicity, skin sensitization and skin irritation specified in USP Class VI and/or ISO 10993 for device use of less than 30 days duration.</p>
<b>Limitations</b>	<p><b>Silbione®</b> silicone products may be used for healthcare applications in accordance with Elkem's healthcare product guidelines. Elkem Silicones supports the sales of these <b>Silbione®</b> 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 <b>Silbione®</b> 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.</p>
<b>Safety</b>	<p>Please consult the Safety Data Sheets of <b>Silbione® HC2 2031 A&amp;B</b>.</p>

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