

Silbione® HC2 2011 A&B

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Solventless Biocompatible Adhesives for Wound and Scar Care

Description **Silbione® HC2 2011 A&B** is a two component silicone gel that crosslinks at room temperature by polyaddition reaction. The polymerization can be accelerated by heat.
The silicone materials are delivered as two viscous liquid components, which once mixed 1:1 and cured, transform into an elastic and resistant gel.

Examples of applications

- Adhesive wound dressings.
- Adhesive sheeting for scar treatment.

Advantages

- Very good adhesion on dry skin.
- No adhesion on moist wounds.
- Proven biocompatibility.
- Fast and easy processing due to low viscosity and 1:1 mixing ratio.
- No free oil.

Characteristics

1. Characteristics of the non-cured product

Properties	Silbione® HC2 2011	
	PART A	PART B
contains	Pt	SiH
Appearance	Low viscous liquids	
Colour	Transparent	
Density (g/cm ³ at 23°C, approx)	0.97	
Viscosity* (at 23°C, mPa.s, approx)	3000	3000

* Brookfield Spindle:3 Speed: 10 rpm ASTM D 2196 UNI-EN-ISO 2555

2. Polymerisation

Properties	Silbione® HC2 2011 A&B
Mixing ratio A:B (Parts by weight)	100:100
Mixing Viscosity (At 23 °C, mPa.s, approx.)	3000
Working Time* (At 23 °C, min, approx.)	160

* Brookfield Spindle:6 Speed: 5 rpm, Time @ 50.000 mPa.sec, ASTM D 2196 UNI-EN-ISO 2555

**Characteristics
(cont')****3. Characteristics of the cured product**

Curing conditions: 1h, 120°C

Properties	Silbione® HC2 2011 A&B
Penetration* (mm/10, approx.)	170

Hollow cone (62,5 g), DIN ISO 2137

Remarks: Curing the silicone at elevated temperature has no influence on the final properties. Due to the inherently weak structural network of silicone gels, mechanical properties cannot be measured on cured gels.

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. Polymerisation

The system polymerises 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 vulcanised 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.

Packaging

Silbione® HC2 2011 A&B is delivered in pails of 25kg.

**Storage and
shelf life**

When stored in its original packaging at a temperature of between -10°C and +30°C, **Silbione® HC2 2011 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.



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Biocompatibility and Toxicity

After curing performed according to the conditions described above, **Silbione® HC2 2011 A&B** complies with a number of regulations for Medical Devices.
Contact Elkem Silicones for more detailed information.

Safety

Please consult the Safety Data Sheets of **Silbione® HC2 2011 A&B**.

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