



## At a Glance

RESION Silicone Casting Rubber Shore 8 is a highly flexible, two-component silicone rubber designed for making moulds, impressions and flexible objects. The material has a simple **1:1 mixing ratio by weight** and cures through a platinum-catalysed addition reaction.

Shore 8 is the softest grade in the RESION silicone casting rubber range. The material is red in colour and is suitable for applications where a high degree of flexibility is required.

The working time is **approximately 30 minutes at 20°C**, and the curing time is **approximately 8 hours at 20°C**.

**Food contact: not tested.**

## Applications

RESION Silicone Casting Rubber Shore 8 is suitable for producing highly flexible moulds, complex impressions and soft silicone objects. Due to its low hardness, the material is particularly suitable for applications where flexibility is more important than rigidity.

The product can be used with 3D-printed moulds. Always carry out a small-scale test beforehand to determine whether the mould material and any other materials in contact with the silicone interfere with curing.

For applications requiring greater dimensional stability, silicone casting rubbers with higher Shore A hardness values are also available within the RESION range. Consult the product selection guide to choose the most suitable grade.



## Key Features

- Very soft and flexible: hardness of  $8 \pm 2$  Shore A.
- Simple mixing ratio of 1:1 by weight.
- Tear-resistant and highly extensible.
- Minimal shrinkage during curing.
- Suitable for complex shapes and highly flexible moulds.

## Technical Specifications

| Property                    | Value                                       |
|-----------------------------|---------------------------------------------|
| Article number              | SR1-08                                      |
| Product type                | Two-component addition-cure silicone rubber |
| Curing system               | Platinum-catalysed                          |
| Hardness                    | $8 \pm 2$ Shore A                           |
| Colour                      | Red                                         |
| Component colours           | Component A: red; Component B: white        |
| Mixing ratio by weight      | 1 part A : 1 part B                         |
| Working time at 20°C        | Approx. 30 minutes                          |
| Curing time at 20°C         | Approx. 8 hours                             |
| Viscosity of mixed material | $1,400 \pm 300$ mPa·s                       |
| Tensile strength            | 3.5 MPa                                     |
| Tear strength               | 17 kN/m                                     |
| Elongation                  | Greater than 670%                           |
| Shrinkage                   | Less than 0.1%                              |

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Polyestershoppen BV  
Oostbaan 680  
2841 ML Moordrecht  
The Netherlands  
tel: +31 (0)85-0220090  
info@polyestershoppen.com



Temperature resistance 200°C

Food contact Not tested

The stated working and curing times are indicative values at 20°C. The temperature resistance refers to a technical material property and does not constitute a declaration of suitability for food contact.

## Processing Instructions

### Preparation

Use clean mixing containers and tools. Avoid contamination with substances that may interfere with curing. Refer to the section *Cure Inhibition* for further information.

Stir components A and B thoroughly and separately before weighing. Use separate, clean stirring tools for each component.

### Measuring and Mixing

Weigh out equal parts by weight of components A and B. The mixing ratio is **1:1 by weight**. For example, mix 100 grams of component A with 100 grams of component B.

Mix both components thoroughly until a homogeneous mixture is obtained. Regularly scrape the bottom and sides of the mixing container during mixing.

Transfer the mixture into a second, clean mixing container, scraping out the first container thoroughly. Mix again carefully. This procedure helps prevent unmixed residues.

### Pouring and Degassing

Slowly pour the mixed silicone rubber into the lowest point of the mould. To ensure accurate reproduction of fine surface details, a thin layer of silicone rubber can first be applied using a brush.

Process the mixture as soon as possible after mixing. At the beginning of the working time, the material has its lowest viscosity, allowing trapped air bubbles to rise more easily.

For the best possible bubble-free results, the mixture can be degassed in a vacuum chamber before pouring. Alternatively, a pressure chamber can be used after pouring to compress any remaining air bubbles.



## Curing and Demoulding

Allow the poured silicone rubber to cure undisturbed. At 20°C, the curing time is approximately 8 hours.

Before demoulding, check that the material has cured sufficiently. For new applications, carry out a test casting to determine whether the selected processing method and demoulding time are suitable.

## Cure Inhibition

RESION Silicone Casting Rubber Shore 8 cures through a platinum-catalysed reaction. Certain substances can interfere with this reaction. This is known as cure inhibition.

Do not mix this product with condensation-cure silicones. Do not use mixing containers or tools that have been contaminated with such silicones.

Avoid contact with substances that may interfere with curing, including certain sulphur-, nitrogen- and phosphorus-containing compounds, as well as tin compounds. These substances may be present in certain clays, sealants and other materials that come into contact with the silicone during mould making.

Do not use pigments or other additives unless their compatibility has been established. If in doubt, always carry out a small-scale curing test using the actual materials intended for the application. This also applies when working with 3D-printed moulds.



## Additives

### Silicone Oil

Silicone oil can be added to reduce the hardness of the cured silicone rubber. Use a low dosage and do not exceed a maximum addition of 15%.

Always carry out a preliminary test to determine whether the modified material meets the requirements of the intended application.

### Silicone Thickener

Silicone thickener can be used to increase the viscosity of the liquid silicone rubber, creating a brushable paste. This allows the material to be applied to vertical surfaces and overhead applications, such as moulding decorative ceiling elements.

### Colouring

This grade is already coloured red. For creating custom colours, the translucent Shore 15 and Shore 40 grades provide a more suitable starting point.

Only use suitable silicone pigments and follow the recommended dosage. Excessive pigment concentrations may interfere with curing.



## Food Contact

**RESION Silicone Casting Rubber Shore 8 has not been tested for contact with food. No Declaration of Compliance for food contact is available for this grade.**

This means that its suitability for food contact has not been established; it does not mean that the material has been found unsuitable.

For applications requiring documented suitability for food contact, RESION Silicone Casting Rubber Shore 15 and Shore 40 are available in both coloured and translucent versions. Specific processing and post-curing instructions apply to these products.

The corresponding test reports and Declarations of Compliance are available in the **Documents** section of the respective product pages. These documents do not apply to Shore 8.

## Custom Formulations for High-Volume Users

For high-volume users, RESION silicone rubbers can be customised to meet specific requirements and production processes. Possible adjustments include colour, working time and curing speed.

Contact Polyestershoppen to discuss your application, desired properties and order quantities. Product specifications and processing instructions for customised formulations are determined separately.

## Safety and Handling

Wear suitable protective gloves and safety glasses when processing the material.

Before use, consult the current Safety Data Sheets (SDS) for components A and B for information on safe handling and personal protection.

## Storage and Shelf Life

Store the components in a dry, dark environment. Close the containers tightly after use to prevent moisture absorption and protect the material from UV light.

Under these storage conditions, the silicone rubber has a shelf life of at least 2 years.



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## Technical Support

For questions regarding processing or curing, consult the online silicone rubber troubleshooting guide on the Polyestershoppen website.

For additional technical assistance, product selection or custom formulations, please contact Polyestershoppen.