

Novasil® S 53

The high temperature-resistant silicone adhesive and sealant

S 53

Characteristics

- ▶ Neutral-curing 1-component silicone sealant and adhesive, MEKO-free
- ▶ Cures at room temperature
- ▶ Excellent adhesion on many substrates, partly in combination with primer
- ▶ Extraordinary long-term temperature resistance up to +265 °C
- ▶ Especially matched viscosity

Fields of application

Domestic appliances industry:

- ▶ Adhesion of baking oven-inside pane
- ▶ Bonding of fixing brackets, mouldings, oven glass doors, door handles
- ▶ Application of elastic sealings, e. g. on the oven door

Heating, ventilation and plant construction:

- ▶ Sealing of moulded boilers and smoke gas cabinets

General Industry:

- ▶ Elastic bonding and sealing in the motor area
- ▶ Elastic bonding and sealing for industrial purposes with a permanent temperature of up to + 265 °C

Standards and tests

- ▶ Licensed according to UL FLAME CLASSIFICATION HB - File no. E176319

Technical properties

Skin-forming time at 23 °C/50 % RH [minutes]	~ 10
Curing in 24 hours at 23 °C/50 % RH [mm]	~ 2 - 3
Processing temperature from/to [°C]	+ 5 / + 40
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,0
Stress expansion modulus at 100 % according to ISO 37, type 3 [N/mm²]	~ 0,7
Tensile expansion according to ISO 37, type 3 [%]	~ 400
Tensile strength according to ISO 37, type 3 [N/mm²]	~ 1,7
Temperature resistance from/to [°C]	- 40 / + 265
Shrinkage of volume according to ISO 10563 [%]	~ 3,5
Shelf life at 23 °C/50 % RH for cartridge/foil bag [months]	12 ¹
Shelf life at 23 °C/50 % RH for pail/drum [months]	9 ¹

1) from production

These data are not suitable for the issue of specifications. Please contact OTTO-CHEMIE before issuing specifications.

Pretreatment

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SEALING & BONDING

The adhesive surfaces must be cleaned and any contamination such as release agents, preservatives, grease, oil, dust, water, old adhesives/sealants and other substances impairing adhesion must be removed.

The adherent surfaces have to be clean, free from fat, dry and sustainable.

The demands on elastic sealings and bondings depend on the respective exterior influences. Extreme fluctuations in temperature, tensile or shear forces, repeated contact with water etc. demand high requirements of a bonding. In such cases it is advisable to apply primer in order to achieve a resilient bonding. Please consult our technical department.

Important information

Before applying this product the user has to ensure that the materials in the area of contact (solid, liquid and gaseous) are compatible with it and also amongst each other and do not damage or alter (e. g. discolour) each other. As for the materials that will be used at a later stage in the surrounding area of the product the user has to clarify beforehand that the substances of content or evaporations do not lead to an impairment or alteration (e. g. discolouration) of the product. In case of doubt the user should consult the respective manufacturer of the material.

During the curing process of the material reaction products of the crosslinker are released.

Ensure good ventilation during application.

The required vulcanization time prolongs with increasing thickness of the silicone layer. One-component silicones are not suitable for full-area bonding, unless there are specific structural conditions that require such full-area application. If one-component silicones are to be used for thickness layers of more than 15 mm please contact our technical department beforehand.

Paints, lacquers, plastics and any other coatings must be compatible to the adhesive/sealant.

Repair by adhesion on electrical devices are to be carried out by service personell of the manufacturer only.


Silicones are usually serviceable over a wide temperature range for long periods of time. The interaction of factors such as the frequency of temperature changes, the heating rate, the air intake, etc. causes a complex time- and temperature-dependent thermal behaviour. Therefore, the behaviour at both the lower and upper end of the temperature spectrum (specified in the technical data) should be tested close to the application in order to check the individual suitability in the application.

Application information

Due to the many possible influences during and after application, the customer always has to carry out trials first.

We recommend to store our products in unopened original packagings dry (< 60 % RH) at temperatures of +15 °C up to +25 °C. If the products are stored and / or transported at higher temperatures / air humidity for longer periods (some weeks), a diminution of durability or a change of material characteristics may arise.

Packaging

	310 ml cartridge
 anthracite	S53-04-C67
Pieces per packaging unit	20
Pieces per pallet	1200

Further delivery forms available on request

Due to typographical reasons the colours shown below may differ from the original colours of the products.

Safety precautions

Please observe the material safety data sheet.

After curing, the product is odourless.

Warranty information

The above information and our technical application advice, whether verbal, in writing or by means of tests, are provided to the best of our knowledge, but are non-binding, including with regard to any third-party property rights. The information in this publication does not exempt the processor from carrying out their own tests on our products with regard to their suitability for the intended processes and purposes. The application, use and processing of our products and the products manufactured on the basis of our technical application advice are beyond our control and are therefore the sole responsibility of the processor. If the application for which our products are used is subject to an official authorisation requirement, the user is responsible for obtaining these authorisations. We reserve the right to adapt the product to technical progress and new developments. For the rest, we refer to our General Terms and Conditions, in particular with regard to any liability for defects. You can find our GTC at www.otto-chemie.de.