Technical datasheet

# Novasil® S 800

## The silicone for the elastic adhesion and sealing of plastics

S 800

## Characteristics

- Neutral curing 1-component silicone adhesive/sealant based on alkoxy
- Excellent weathering, ageing and UV-resistance
- Excellent self-adhesion on plastics
- High adhesive power
- Non-corrosive
- Low odour
- Does not cause stress cracks in non-prestressed acrylic glass and polycarbonate

## Fields of application

**Renewable energies:**
- Elastic bonding of frames to PV-modules
- Adhesion and sealing of junction boxes

**Domestic appliances industry:**
- Bonding of door pillars, brackets and mouldings

**Lighting and electronics industry:**
- Elastic bonding and sealing of lamp casings
- Elastic bonding and sealing of electrical and electronic components

**Heating, ventilation and plant construction:**
- Sealing of connecting and expansion joints for air-conditioning and ventilation technology purposes

**General Industry:**
- Elastic bonding and sealing for industrial purposes with a permanent temperature of up to + 180 °C

## Standards and tests

- Tested according to DIN 4102-B1 - hardly inflammable
- UL 94 Flame Classification HB, RTI 105 °C, File No. E 176319
- The product has been tested according to the criteria of the American Food and Drug Administration (FDA, 21 CFR 177.2600) and is suitable for repeated contact with non-fatty foods. Pre-requisite for an application as part of these regulations is the corresponding treatment of the vulcanizate such as by means of heat treatment in order to remove volatile and extractable parts before use.
- The compatibility with strainless Plexiglas® has been tested and confirmed by the manufacturer. Test report on the compatibility with Plexiglas®- XT is available.
- The compatibility with prestressed Makrolon® has been tested and confirmed by the manufacturer. Test report on the compatibility with Makrolon® is available.

## Technical properties

| | |
|---|---|
| Skin-forming time at 23 °C/50 % RH [minutes] | ~ 20 |
| Curing in 24 hours at 23 °C/50 % RH [mm] | ~ 2 |
| Processing temperature from/to [°C] | + 5 / + 40 |
| Density at 23 °C according to ISO 1183-1 [g/cm³] | ~ 1,4 |
| Viscosity at 23 °C | pasty, stable |
| Shore-A-hardness according to ISO 868 | ~ 45 |

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SEALING & BONDING

| | |
|---|---|
| Stress expansion modulus at 100 % according to ISO 37, type 3 [N/mm²] | ~ 1,0 |
| Tensile expansion according to ISO 37, type 3 [%] | ~ 480 |
| Tensile strength according to ISO 37, type 3 [N/mm²] | ~ 3,0 |
| Temperature resistance from/to [°C] | - 40 / + 180 [1] |
| Dielectric strength ED according to DIN EN 60243 [kV/mm] | ≥ 15 |
| Volume resistance ρ according to DIN IEC 93 [Ω*cm] | 10 ^14 |
| Thermal conductivity λ [W/mK] | ~ 0,36 |
| Shelf life at 23 °C/50 % RH for cartridge/foil bag [months] | 9 [2] |

1) Refers to the colour black, all other colours resistant up to +150°C or, over the short term (up to 500 h), up to 180°C.

2) from production

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

## Pretreatment

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.
Certain plastics need a special surface treatment to achieve optimal adhesion on it. Please contact our technical department for this.

## 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.
Paints, lacquers, plastics and any other coatings must be compatible to the adhesive/sealant.
During curing small amounts of alcohol are released.
Ensure good ventilation during application and curing.
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.

## Application information

Sensitive to smoothing agents. It is recommended to remove the product in a dry state, as smoothing agents may cause the surface to be tacky.
Due to the many possible influences during and after application, the customer always has to carry out trials first.
In order to achieve good adhesion and good mechanical properties air entrapment must be avoided.
Please observe the recommended shelf life which is printed on the packaging.
We recommend to store our products in unopened original packaging dry (< 60 % RH) at temperatures of +15 °C up to +25 °C. If S 800 is stored at temperatures above 30 °C for a longer period of time (several weeks) this will lead to a considerably shorter shelf life.

## Packaging

| | **310 ml cartridge** |
|---|---|
| **black** | S800-04-C04 |
| **white** | S800-04-C01 |
| **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.

## Disposal

Information about disposal: Please refer to the material safety data sheet.

## Brand information

Plexiglas® is a registered trademark of company Evonik-Röhm GmbH (Darmstadt)
Makrolon® is a registered brand of the company Covestro Deutschland AG (Leverkusen)

## 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.