Technical datasheet

# Novasil® S 152

## The thermally conductive 2-component potting silicone

S 152

## Characteristics

- 2-component potting silicone
- Based on a neutral, condensation curing system
- Thermally conductive
- Flame resistant
- Cures at room temperature
- Releases alcohol as splitting product during curing.

## Fields of application

**Lighting and electronics industry:**

- Potting of electronical structural units
- Waterproof sealing of measuring units
- Potting / coating of electrical circuit boards

## Standards and tests

- According to the requirements of UL 94 V-0

## Technical properties

**Single components:**
**Component A**

| | |
|---|---|
| **Colour** | C01 white |
| **Viscosity (Brookfield, Sp.07, 50 UPM, +23 °C) [mPas]** | ~ 30.000 |
| **Density at 23 °C according to ISO 1183-1 [g/cm³]** | ~ 1,52 |
| **Shelf life at 23 °C/50 % RH [months]** | 6 [1] |

1) from production

**Component B**
**OTTOCURE**

| | S-CA 2325 | S-CA 2420 |
|---|---|---|
| **Colour** | C00 transparent | C00 transparent |
| **Viscosity at 23 °C [mPas]** | ~ 180 | ~ 80 |
| **Density at 23 °C according to ISO 1183-1 [g/cm³]** | ~ 0,98 | ~ 0,97 |
| **Shelf life at 23 °C/50 % RH [months]** | 6 [1] | 6 [1] |

1) from production

**Mixed components**
**With OTTOCURE**

| | S-CA 2325 | S-CA 2420 |
|---|---|---|
| **Colour** | white | white |
| **Viscosity (Brookfield, Sp.07, 50 UPM, +23 °C) [mPas]** | ~ 9.000 | ~ 9.000 |

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SEALING & BONDING

| | | |
|---|---|---|
| **Density at 23 °C according to ISO 1183-1 [g/cm³]** | ~ 1,52 | ~ 1,52 |
| **Pot life at 23 °C/50 % RH [minutes]** | ~ 20 | ~ 120 |
| **Shore-A-hardness after 4 hours** | ~ 25 | - |
| **Shore-A-hardness after 6 hours** | - | ~ 15 |
| **Shore-A-hardness after 24 hours** | ~ 50 | ~ 50 |

**Vulcanisate:**

| | |
|---|---|
| **Density at 23 °C according to ISO 1183-1 [g/cm³]** | ~ 1,52 |
| **Shore-A-hardness according to ISO 868** | ~ 70 |
| **Temperature resistance from/to [°C]** | - 40 / + 150 |
| **Thermal conductivity λ [W/mK]** | ~ 0,6 |
| **Tensile strength according to ISO 37, type 3 [N/mm²]** | ~ 2,4 |
| **Tensile expansion according to ISO 37, type 3 [%]** | ~ 60 |
| **Volume resistance ρ according to DIN IEC 93 [Ω*cm]** | 9,2 * 10^12 |
| **Dielectric strength according to DIN IEC-243-2 [kV/mm]** | 17 |

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

## Pretreatment

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

## 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 curing small amounts of alcohol are released.
Ensure good ventilation during application and curing.
The colour shade can be influenced by temperature and chemicals. These possible changes of the colour shades have no influence on the protective properties of the product.
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

| | |
|---|---|
| **Processing temperature from/to [°C]** | +10 / +25 [1] |
| **Mixing ratio according to weight (base A : curing agent B)** | 15 : 1 |
| **Mixing ratio according to volume (base A : curing agent B)** | 10 : 1 |
| **Maximum permissible deviation from the mixing ratio [%]** | ± 10 |

1) temporarily up to + 30 °C

Avoid entrapment of air during mixing. Therefore we recommend to use a mixing equipment.
As the filling agents in component A can settle down (sedimentation) during storage , it must be stirred up homogeneously in the original packaging prior to mixing it with component B or prior to filling it into the storage containers of a mixing and dosing installation.
Component A does not react with air humidity and is stable under normal conditions (23 °C, 50 % RH).
Component B is sensitive to moisture and therefore must be protected from moisture.
Advice for the lay out design of the mixing and dosing installation: we advise the use of stainless steel storage containers and EPDM o-ring sealing. To prevent the diffusion of humidity please use hoses with Teflon coating inside. If you decide to use different sealing materials, please contact the Application Engineering department.
To make sure the mixing is correct the user has to carry out accompanying quality checks during application. The according necessary tests have to be gathered from the document “Accompanying Quality Checks for the processing of 2-component Silicones”, which is available from our technical department.

## Packaging

Packagings and other colours on request.

## 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.