Technical datasheet

Novasil® S 822

The premium 2-component potting silicone

S 822

Characteristics

- 2-component potting silicone
- Fast curing
- Excellent flowability
- Electrically non-conductive
- Non-corrosive

Fields of application

Renewable energies:

- Potting of junction boxes in the PV-industry

Lighting and electronics industry:

- Potting and coating of electronic and electric components
- Waterproof sealing of measuring units
- Potting / coating of electrical circuit boards

Standards and tests

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

Technical properties

Single components:
Component A

Colour	transparent
Viscosity at 23 °C [mPas]	~ 10 000
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,02
Shelf life at 23 °C/50 % RH [months]	9 [1]

1) from production

Component B
OTTOCURE

	S-CA 2205	S-CA 2420
Colour [1]	transparent	transparent
Viscosity at 23 °C [mPas]	~ 80	~ 80
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 0,97	~ 0,97
Shelf life at 23 °C/50 % RH [months] [2]	9	6

1) During storage, the material may discolour a yellowish or brownish colour, even in an unopened container. This is typical of the material and is not a product defect. The technical properties of the material remain unaffected within the guaranteed storage stability.

2) from production

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SEALING & BONDING

Mixed components
With OTTOCURE

	S-CA 2205	S-CA 2420
Colour	transparent	transparent
Viscosity at 23 °C [mPas] [1]	~ 8000	~ 8000
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,0	~ 1,0
Pot life at 23 °C/50 % RH [minutes]	7 - 18	~ 30
Shore-A-hardness after 4 hours	> 5	0
Shore-A-hardness after 8 hours	---	> 3
Shore-A-hardness after 24 hours	> 12	> 10

1) after production

Vulcanisate:

Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,0
Shore-A-hardness according to ISO 868	~ 19
Temperature resistance from/to [°C]	- 40 / +150 [1]
Tensile strength according to ISO 37, type 3 [N/mm²]	~ 0,3 - 0,7
Tensile expansion according to ISO 37, type 3 [%]	~ 100 - 160
Thermal conductivity λ [W/mK]	~ 0,2
Specific inductive capacity according to DIN VDE 0303 T 4 test frequency 120 Hz	~ 2,42
Specific inductive capacity according to DIN VDE 0303 T 4 test frequency 40 kHz	~ 2,72
Loss factor tan δ at f = 120 Hz (DIN VDE 0303 T 4)	~ 7 * 10-4
Loss factor tan δ at f = 40 kHz (DIN VDE 0303 T 4)	~ 2 * 10-3
Volume resistance ρ according to DIN IEC 93 [Ω*cm]	~ 5,7 * 10^14
Dielectric strength ED according to DIN EN 60243 [kV/mm]	15,8
Track resistance (CTI-value) according to UL 746 A (ASTM D3638) [V]	~ 600

1) After complete curing a temperature resistance up to approx. +150 °C can be reached. Constant use under high temperatures and/or high humidity (RH > 60 %) may change the properties of the material or lead to an interaction with neighbouring materials.

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.

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.
Contact with chemicals and when used in light protected applications can lead to a slight yellowing of the cured product. A possible change in colour does not necessarily influence the functionality.

Application information

Processing temperature from/to [°C]	+10 / +25 [1]
Mixing ratio according to weight (base A : curing agent B)	10,5 : 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

Application of fluid 2-component products from side-by-side cartridges with compressed air gun only (due to possible pressure fluctuations hand-operated guns are not suitable!!)
Insert closed cartridges into the pistol. Hold pistol upright and remove fastener and plug. Adjust pressure with regulating valve to approx. 1 - 1,5 bar. Hold pistol aslope and press until material discharges from both components. Wipe off excess material.

Adjust working pressure at the regulatin valve to 1,5 - 2 bar. Put on static mixing nozzle MFHX 06-32 in vertical position, fasten it and fill it with material right to the tip of the static mixing nozzle.

The sealing silicone can now be extruded. During breaks and whenever the pistol is put down please always put a cloth under

the tip of the mixer to collect excess material. Wipe static mixing nozzle tip clean before restarting work.

When the job is finished please dispose of the static mixing nozzle and close cartridges (if not yet empty) with plug and fastener.
Avoid entrapment of air during mixing. Therefore we recommend to use a mixing equipment.
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.
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 diminuition of durability or a change of material characteristics may arise.

Packaging

	490 ml side-by-side plastic cartridge
◯ **transparent**	S822-43-2205-C00
Pieces per packaging unit	**9**
Pieces per pallet	**540**

*OTTO Static mixing nozzle MFHX 06-32T
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.

Disposal

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

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.