

OTTOSEAL® S 94 SPECIAL

The neutral fire protection silicone B1



1-component silicone sealant based on oxime, neutral cross-linking, MEKO-free

For indoor and outdoor application

S 94



Characteristics

- ▶ Flame retardant - building material class B1 according to DIN 4102 - Can be used under increased fire protection requirements
- ▶ Does not cause corrosion on unprotected metal surfaces
- ▶ Excellent weathering, ageing and UV-resistance
- ▶ Good compatibility with paints according to DIN 52452 (not paintable) - No interaction with existing and adjacent coatings

Fields of application

- ▶ Sealing of fire protection elements, e.g. fire-resistant glazing

Standards and tests

- ▶ Tested according to EN 15651 – Part 1: F EXT-INT CC 25 LM
- ▶ Tested according to EN 15651 – Part 2: G CC 25 LM
- ▶ Tested according to EN 15651 – Part 4: PW INT 12.5 E
- ▶ Tested according to DIN 4102-B1 – hardly inflammable between solid mineral building materials (wood research at the Munich Technical University)
- ▶ Tested according to DIN 25415, part 1 - very good decontamination properties of the sealant surface (German Materials Research and Testing Agency, 12200 Berlin, Germany)
- ▶ Quality seal of the IVD (Industrial association for sealants, registered society), tested by the ift Rosenheim (Institute of window engineering, registered society)
- ▶ According to regulation (EG) no. 1907/2006 (REACH)
- ▶ Suitable for applications according to IVD instruction sheet no. 9+11+20+24+27+29+31+35 (IVD = German industry association sealants)

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 / + 35
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1, coloured [g/cm³]	1,2
Density at 23 °C according to ISO 1183-1, transparent [g/cm³]	1,0
Shore-A-hardness according to ISO 868, coloured	~ 25



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Shore-A-hardness according to ISO 868, transparent	~ 20
Permissible movement capability [%]	25 ¹
Class according to ISO 11600	25 LM
Stress expansion modulus at 100 % according to ISO 37, type 3 [N/mm ²]	~ 0,4
Tensile expansion according to ISO 37, type 3 [%]	~ 550
Tensile strength according to ISO 37, type 3 [N/mm ²]	~ 1,5
Extrusion rate according to ISO 8394-1 [g/min.]	50 - 150
Shrinkage of volume according to ISO 10563 [%]	~ 7
Temperature resistance from/to [°C]	- 40 / + 180
Shelf life at 23 °C/50 % RH for cartridge/foil bag [months]	15

1) Please pay attention to standards and tests

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. Cleaning of non-porous substrates: Clean with OTTO Cleaner T (no flash-off time required) and a clean, lint-free cloth. Cleaning porous substrates: Clean surfaces mechanically, e.g. with a steel brush or a grinding disc, to remove loose particles.

Primer table

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 according to the recommendations of our technical department (e. g. +/OTTO Primer 1216) in order to achieve a resilient bonding.

Aluminium	+
Aluminium anodized	1101 / 1216
Aluminium powder-coated	1101 / T
Aluminium powder-coated (contains teflon)	T
Concrete	1105 / 1215
Epoxid resin coating	+
Epoxid resin mortar	+
Stainless steel	1101 / 1216
Fibre cement	1105 / 1215
Glass	+ / 1226
Ceramic, glazed	+
Ceramics, unglazed	+
Copper	1101 / 1216 ¹
Natural stone / marble	-
Plaster	1105 / 1215
Zinc, galvanised iron	1216

1) The reaction of neutral silicone with non-ferrous metals, such as copper, brass, etc. is possible. Upon curing un-blocked air admission is necessary.

+ = good adherence without primer

- = not suitable

T = Test/pilot test advised

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.

The building material class B1 will be accomplished after the sealant is completely cured. In contrast to many other flame

resistant plastics the sealant contains fireproofing agents that do not release harmful substances in case of fire. The building material class B1 is the pre-condition for fire-resistant classes, such as F30/F60/F90 for building components. Sealants are not classified according to fire-resistant classes but according to building material classes. During the curing process of the material reaction products of the crosslinker 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

Due to the many possible influences during and after application, the customer always has to carry out trials first. Please observe the recommended shelf life which is printed on the packaging. 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

Glossy colors

	310 ml cartridge	580 ml aluminium foil bag
● black	S94-04-C04	on request
● grey	S94-04-C02	S94-08-C02
○ transparent	S94-04-C00	on request
○ white	S94-04-C01	S94-08-C01
Pieces per packaging unit	20	20
Pieces per pallet	1200	600

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.

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.