OTTOSEAL®
S 94

Technical Datasheet

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

For indoor and outdoor application

Characteristic:

- **Flame retardant - building material class B1 according to DIN 4102**
  For special fire protection requirements
- **Non-corrosive**
  No (oxidation) corrosion on unprotected metal surfaces
- **Good compatibility with paints according to DIN 52452 (not paintable)**
  No interaction with existing and adjacent coatings
- **Excellent weathering, ageing and UV-resistance**
  For long-lasting indoor and outdoor applications
- **Stress expansion modulus at 100 % (ISO 37, S3A): 0,4 N/mm²**

Fields of application:

- Sealing of structural components, that require an increased fire performance requirements (e. g. fire-resistant building components and fire-resistant glazing)
- Suitable for sealing glazing units

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)
- Suitable for applications according to IVD instruction sheet no. 9+11+20+24+27+29+31+35 (IVD = German industry association sealants)
- 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)
- Classification according to building certification systems, see the sustainability data sheet
- French VOC-emission class A+

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.

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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 must not be used for full-surface bonding applications unless special constructional prerequisites are met. If one-component silicones are to be used for thickness layers of more than 15 mm please contact our technical department beforehand.

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
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, S3A [N/mm²]	~ 0,4
Tensile expansion according to ISO 37, S3A [%]	~ 550
Tensile strength according to ISO 37, S3A [N/mm²]	~ 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.
All adherent surfaces must be clean and any contaminant such as release agents, preserving agents, grease, oil, dust, water, old adhesives or sealants and other substances which could affect adhesion, should be removed. Cleaning of non-porous substrates: Apply OTTO Cleaner T (airing time approx. 1 minute) using a clean, lint-free cotton cloth. Cleaning porous substrates: Clean surfaces with steel-wire brush e. g. or a grinding disk 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

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Zinc, galvanised iron	1216

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

+ = good adherence without primer
- = not suitable
T = Test/pilot test advised

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 diminuition of durability or a change of material characteristics may arise.

Packaging:

	310 ml cartridge
black	S94-04-C04
grey	S94-04-C02
transparent	S94-04-C00
white	S94-04-C01
Packaging unit	**20**
Pieces per pallet	**1200**

Safety precautions:

Please observe the material safety data sheet.
After curing the product is completely odourless.

Disposal:

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

Warranty information:

All information in this publication is based on our current technical knowledge and experience. However, since conditions and methods of use and application of our products are beyond our control, we suggest that you test the product before final use. Information given in this technical data sheet and explanations of OTTO-CHEMIE in connection with this technical data sheet (e.g. service description, reference to DIN regulations etc.) is not to be seen as a warranty. Warranties require a separate written declaration of OTTO-CHEMIE to prove their validity. The characteristics stated in this data sheet define the characteristics of the article broadly and concludingly. Suggestions of use are not to be taken as confirmation of the appropriateness for the recommended intended use. We reserve the right to alter the product, adjusting it according to technical progress and new developments. We are at your disposal both for inquiries as well as specific application problems. If a governmental approval or clearance is necessary for the application of our products, the user is responsible for the obtainment of such. Our recommendations do not excuse the user from the obligation to take into consideration the possibility of infringement of third parties' rights and - if necessary - resolving it. For the rest our general terms and conditions apply, in particular regarding a possible liability for defects. You can find our general terms and conditions on our homepage: http://www.otto-chemie.de/en/terms-and-conditions

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