

OTTOSEAL®**S 110****Technical Datasheet****Characteristics:**

- Neutral-curing 1-component silicone sealant
- Excellent weathering, ageing and UV-resistance
- Excellent early stressability
- High abrasion-proof and non-streaky
- Good compatibility with paints according to DIN 52452 (not paintable)
- Tack-free surface
- Excellent adhesion on many substrates, partly in combination with primer
- Non-corrosive
- Contains fungicides
- Compatible with PVB-foils in laminated safety glass units

Fields of application:

- Glazing and sealing application on wooden windows
- Sealing of connecting joints on windows and doors made of wood, metal and plastic
- Sealing double-glazings (e. g. "Profilit")
- Expansion and connecting joints on prefabricated concrete and cellular concrete units
- Sealing of joints on façades, metal constructions, terraces and balconies
- Suitable for sealing glass elements made of laminated and tempered glass. Please contact our technical department for further information.
- Expansion and connecting joints in bathroom areas

Standards and tests:

- Tested according to DIN 18545, part 2, resistance group E (ift Rosenheim, germany)
- According to the requirements of DIN 18540-F
- According to the requirements of ISO 11600 G 25 LM
- Tested according to FCBA (CTBA) L 114 (suitability of sealants for glazing and sealing application of wooden windows)
- "Especially recommendable economic building material" according to building material list (TOXPROOF) of the TÜV Rheinland, Germany
- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
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Important information:

Before applying the adhesive / sealant the user has to ensure that the materials in the area of contact (solid, liquid and gaseous) are compatible with the adhesive / sealant and do not damage or alter (e. g. discolour) them. As for the materials that will be used at a later stage in the surrounding area of the adhesive / sealant 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 adhesive / sealant. In case of doubt the user should consult the respective manufacturer of the material.

Avoid contact with materials which contain bitumen and which release solvents, e. g. butyl, EPDM, neoprene, insulating- and bituminous paint.

Paints, lacquers, plastics and any other coatings must be compatible to the adhesive/sealant.

Due to the multitude of paint systems for wooden windows a general statement regarding adhesion properties or compatibility is not possible. Individual preliminary tests are required.

Do not stack or pack sealed windows/doors earlier than 24 hours after sealing. Otherwise there is a risk of a discolouration of the painting.



During the curing process of the material reaction products of the crosslinker are released. Ensure good ventilation during application and curing. After curing the product is completely odourless, physiologically harmless and unmodified. The required vulcanization time prolongs with increasing thickness of the silicone layer. One-component silicones must not be used for full-surface bonding applications except special xzy are provided. If one-component silicones are to be used for thickness layers of more than 15 mm please contact our technical department beforehand. If using smoothing agent remove the remaining water streaks on the adjoining surfaces immediately after sealing. If the surfaces are cleaned at a later time, permanent streaks may remain. Smoke from cigarettes or similar environmental influences may lead to discolouring of the sealant. For the sealing butt joints between insulating glass with UV-resistant edge bond based on silicone (e. g. angled glazing, structural glazing façades, etc.) we recommend OTTOSEAL® S 7. Upon restoring of joints contaminated with mould the existing elastic sealant must be removed completely. Before re-jointing, the affected jointing areas are to be treated with OTTO Anti-Mildew Spray to remove possibly existing fungal spores. Otherwise a new mould attack may occur in the joints again, despite the mould protection technology of the sealant. Please observe the Technical Datasheet of OTTO Anti-Mildew Spray.

Technical properties:

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|---|--------------------------------|
| Skin-forming time at 23 °C / 50 % RAH | approx. 8 minutes |
| Curing in 24 hours at 23 °C / 50 % RAH | approx. 2 mm |
| Processing temperature | +5 °C up to +35 °C |
| Viscosity (23 °C) | pasty, stable |
| Density at 23 °C, coloured | approx. 1,16 g/cm ³ |
| Density at 23°C, transparent | approx. 1,01 g/cm ³ |
| Shore-A-hardness (DIN 53 505) coloured | approx. 25 |
| Shore-A-hardness (DIN 53 505) transparent | approx. 20 |
| Permissible movement capability | 25 % |
| Stress expansion modulus at 100 % (DIN 53 504, S3A) | approx. 0,40 N/mm ² |
| Breaking expansion (DIN 53 504, S3A) | approx. 650 % |
| Tensile strength (DIN 53 504, S3A) | approx. 1,5 N/mm ² |
| Temperature resistance | -40 °C up to +180 °C |
| Shelf life at 23 °C / 50 % RAH for cartridge / foil bag | 12 months |
| Shelf life at 23 °C / 50 % RAH for pail / drum | 12 Monate |

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

Pretreatment:

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

Primer Table:

The OTTO Primer 1215, 1217 and 1218 are subject to the obligation to inform and to keep records according to the Regulation of Chemical Interdiction (amongst others prohibition of self service) since 01.11.2005. Please observe the Technical Data Sheets (www.otto-chemie.de). 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.

| | |
|---|-----------------|
| Acrylic glass / PMMA (Plexiglas®, etc.) | - |
| Acrylic bathroom surfaces (e. g. bath tubs) | + / 1101 |
| Aluminium | + |
| Aluminium anodized | + |
| Aluminium powder-coated | 1101 / T |
| Aluminium powder-coated (contains teflon) | T |
| Concrete | + / 1105 / 1215 |
| Concrete block | - |
| Lead | + / 1216 |

| | |
|--|---------------------|
| Chrome | 1216 |
| Stainless steel | + / 1216 |
| Iron | 1216 |
| Epoxid resin coating | T |
| Fibre cement | 1105 / 1215 |
| Glass | + |
| Wood, painted (solvent systems) | + |
| Wood, painted (aqueous systems) | + |
| Wood, varnished (solvent systems) | + |
| Wood, varnished (aqueous systems) | + |
| Wood, untreated | 1215 / 1226 (1) |
| Ceramic, glazed | + |
| Ceramics, unglazed | + |
| Clinker | 1215 |
| Artificial stone | - |
| Plastic profiles, e. g. Vinnolit | + / 1217 / 1227 (2) |
| Copper | + (3) |
| Melamine formaldehyde resins (e. g. Resopal®) | 1225 |
| Brass | + (4) |
| Natural stone / marble | - |
| Polyester | + |
| Polypropylene | - |
| Cellular concrete | 1105 / 1215 |
| Plaster | + / 1105 / 1225 |
| PVC unplasticized | + / 1217 / 1227 |
| PVC-soft-foils | 1217 / 1227 |
| Tinplate | 1216 |
| Zinc, galvanised iron | + |

+ = good adherence without primer

- = not suitable

T= Test/pilot test advised

1) Upon high exposure to water please contact our Technical Department.

2) With OTTOSEAL® S 110 transparent a pre-treatment with OTTO Primer 1217 is advisable. And foil-coated plastics should generally be pre-treated with OTTO Primer 1217.

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

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

Application information:

Because of the variety of possible influences while processing and applying customer tests are required.

Please observe the recommended shelf life which is printed on the packaging.

We recommend to store our products in unopened original packagings dry (< 60 % RAH) 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:

Please see the packagings available from stock in our current General Catalogue for Building Products.

| Trading unit/Container | Packaging unit | Pieces per pallet |
|---------------------------|----------------|-------------------|
| 310 ml cartridge | 20 | 1200 |
| 400 ml aluminium foil bag | 20 | 900 |
| 580 ml aluminium foil bag | 20 | 600 |

Colours:

| | | | |
|-----|---------------|-----|-----------|
| C56 | concrete grey | C05 | brown |
| C13 | bronze | C76 | beech |
| C49 | dark brown | C03 | dark grey |
| C57 | oak | C83 | dark oak |



| | | | |
|-------|------------------------|-------|---------------------|
| C64 | fair oak | C06 | fair brown |
| C20 | fair grey | C742 | chestnut |
| C88 | pine | C01 | white |
| C284 | transparent-grey | C29 | mahogany |
| C00 | transparent | C43 | manhattan |
| C1416 | matt brown | C6005 | moosgreen / RAL6005 |
| C94 | silver-grey | C77 | silk grey |
| C04 | black | C39 | chocolate brown |
| C116 | snow-white | C31 | ochre |
| C18 | sanitary grey | C12 | sand-beige |
| C84 | pergamon | C9001 | RAL 9001 |
| C9016 | RAL 9016 traffic white | C1216 | jasmin |
| C155 | anthracite | | |

Safety precautions: Please observe the material safety data sheet.

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 experiences. However, since conditions and methods of use and application of our products are beyond our control, we suggest you to 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 conclusively. 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. If you happen to not have our general terms and conditions at hand, we will gladly send them to you upon request. You can also find them on our homepage: http://www.otto-chemie.de/englisch/unternehmen/agb/AGB-Englisch_04-05.pdf

