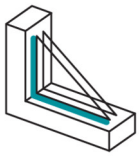
Technical datasheet

OTTOSEAL® S 120

PREMIUM

The premium glazing silicone



1-component silicone sealant based on alkoxy, neutral cross-linking | For indoor and outdoor application | S 120

Characteristics

- Highly abrasion-resistant and streak-free according to ift-guideline VE-04/2 - For non-streaky cleaning
- Excellent weathering, ageing and UV-resistance
- Low odour - No odour nuisance
- Compatible with PVB sheets according to the criteria of ift guideline DI-02/1 - Suitable for processing VSG
- Very good adhesion on many substrates even without primer (see the primer table)
- Good compatibility with paints according to DIN 52452 (not paintable) - No interaction with existing and adjacent coatings
- Excellent early resistance to stress during component movements
- Available in matte colours - Harmonises perfectly with matte surfaces
- Contains fungicides - Resistance to mould infestation
- Does not cause corrosion on unprotected metal surfaces

Fields of application

- Window pane sealing on wooden windows
- Sealing of joints on façades, metal constructions
- Sealing of joints on windows and doors made of wood, metal and plastic
- Sealing of expansion and connections joints on prefabricated concrete and cellular concrete units
- Sealing double glazings / glass modules
- For jointing on glass elements
- For the external sealing of mirrors in connection with materials such as ceramic, metal, glass etc.

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 fire behaviour in accordance with EN 13501: class E
- Tested according to ift-guideline VE-04/2
- Tested according to the BEMMA scheme for museum and show case equipment
- According to the requirements of DIN 18540-F
- According to the requirements of ISO 11600 G 25 LM
- KOMO certificate no. 33410 (The regulations as per NPR 3577 are to be observed)
- EMICODE® EC 1 Plus - very low emission
- Quality seal of the IVD (Industrial association for sealants, registered society), tested by the ift Rosenheim (Institute of window engineering, registered society)
- French VOC-emission class A+
- Declaration in "baubook" Austria

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OTTO CHEMIE
SEALING & BONDING

- According to regulation (EG) no. 1907/2006 (REACH)
- Suitable for applications according to IVD instruction sheet no. 7+9+10+13+14+19-1+20+22+24+25+27+29+31+32+35 (IVD = German industry association sealants)

Technical properties

Skin-forming time at 23 °C/50 % RH [minutes]	~ 15
Curing in 24 hours at 23 °C/50 % RH [mm]	~ 2
Processing temperature from/to [°C]	+ 5 / + 40
Viscosity at 23 °C	pasty, stable
Density at + 23 °C [g/cm³]	~ 1,0
Density at 23°C according to ISO 1183-1, matt [g/cm³]	~ 1,3
Shore-A-hardness according to ISO 868	~ 21
Shore-A-hardness according to ISO 868, matt colours	~ 31
Permissible movement capability [%]	25 [1]
Class according to ISO 11600	25LM
Stress expansion modulus at 100 % according to ISO 37, type 3 [N/mm²]	~ 0,4
Tensile expansion according to ISO 37, type 3 [%]	~ 500 - 700
Tensile strength according to ISO 37, type 3 [N/mm²]	~ 1,4
Temperature resistance from/to [°C]	- 40 / + 120
Extrusion rate according to ISO 8394-1 [g/min.]	~ 110 - 150
Shrinkage of volume according to ISO 10563 [%]	~ 3
Shelf life at 23 °C/50 % RH for cartridge/foil bag [months]	12 [2]
Shelf life at 23 °C/50 % RH for pail/drum [months]	9 [2] [3]

1) Please pay attention to standards and tests

2) from production

3) Additional note: 1K products harden by reacting with air humidity. The container must therefore be kept tightly sealed. A skin may form on the outer surface of a hobbock or barrel. This must be removed before the container enters the dosing system.

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

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.

Acrylic glass/PMMA	-
Aluminium	+
Aluminium anodized	+
Aluminium powder-coated	1101 / T
Aluminium powder-coated (contains teflon)	T
Concrete	+ / 1105 / 1215
Concrete block	-
Stainless steel	+ / 1216
Iron	T
Epoxid resin coating	+
Epoxid resin mortar	+ / 1225
Glass	+ / 1226
Wood, painted (solvent systems)	+ / T [1]

Wood, painted (aquaeous systems)	+ / T [1]
Wood, varnished (solvent systems)	+ / 1216 [1]
Wood, varnished (aquaeous systems)	+ / T [1]
Wood, untreated	+ [2]
Ceramic, glazed	+
Ceramics, unglazed	+
Clinker	1215
Plastic profiles (unplasticized, e. g. Vinnolit)	1217 / 1227 / T
Copper	+ [3]
Melamine resin panels	T
Brass	+ [3]
Natural stone / marble	-
Polyester	T
Polypropylene	-
Cellular concrete	1105 / 1215
Plaster	1105 / 1215
PVC unplasticized	1217 / 1227
PVC-soft-foils	1217 / 1227
Zinc, galvanised iron	+

1) Due to the large number of painting systems for wooden windows, it is not possible to make a general statement regarding bonding and compatibility. For this reason, individual preliminary experiments are necessary.

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

3) The reaction of neutral silicone with non-ferrous metalls, 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.
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.
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 curing small amounts of alcohol 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.
Matt colours can be smoothed off with smoothing agent.
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.
Indoors without daylight or in the case of sporadic artificial lighting, alkoxy/oxime/amine silicone sealants may exhibit a yellowing over time, especially in transparent and light colours. If technically possible, it is recommended to use acetate silicones in these cases.
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.

Application information

Due to the many possible influences during and after application, the customer always has to carry out trials first.
Observe the following when smoothing matte colours with OTTO smoothing agents: The joints should only be tooled once with a smoothing tool, which was dipped in OTTO smoothing agent. The more often the surface is reworked with smoothing agent, the more the matte effect is lost and the joint becomes glossier.
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

Glossy colors

	310 ml cartridge	400 ml aluminium foil bag	580 ml aluminium foil bag	20 l hobbock
anthracite	S120-04-C155	on request	S120-08-C155	on request
black	S120-04-C04	S120-07-C04	S120-08-C04	on request
brown	S120-04-C05	on request	S120-08-C05	on request
chestnut	on request	on request	S120-08-C742	on request
chocolate brown	S120-04-C39	on request	on request	on request
concrete grey	S120-04-C56	on request	on request	on request
dark brown	S120-04-C49	on request	on request	on request
dark grey	S120-04-C03	on request	on request	on request
dark oak	S120-04-C83	on request	on request	on request
fair grey	S120-04-C904	on request	on request	on request
fair oak	S120-04-C64	on request	on request	on request
manhattan	S120-04-C43	on request	S120-08-C43	on request
RAL 9010	S120-04-C9010	on request	S120-08-C9010	on request
RAL 9016	S120-04-C9016	on request	S120-08-C9016	on request
silk grey	S120-04-C77	on request	S120-08-C77	on request
silver grey	S120-04-C94	on request	on request	on request
snow white	S120-04-C116	on request	on request	on request
transparent	S120-04-C00	S120-07-C00	S120-08-C00	S120-23-C00
transparent black	S120-04-C8571	S120-07-C8571	on request	on request
transparent grey	S120-04-C284	S120-07-C284	on request	on request
white	S120-04-C01	S120-07-C01	S120-08-C01	on request
Pieces per packaging unit	**20**	**20**	**20**	**1**
Pieces per pallet	**1200**	**900**	**600**	**16**

Matte colors

	310 ml cartridge	400 ml aluminium foil bag	580 ml aluminium foil bag	20 l hobbock
matt anthracite	S120-04-C7103	S120-07-C7103	S120-08-C7103	on request
matt black	S120-04-C7112	on request	S120-08-C7112	on request
matt brown	S120-04-C1416	on request	on request	on request
matt chestnut	S120-04-C7114	on request	on request	on request
matt concrete grey	S120-04-C7102	on request	on request	on request
matt dark brown	S120-04-C7107	on request	on request	on request
matt dark grey	S120-04-C7113	on request	on request	on request
matt dark oak	S120-04-C7104	on request	on request	on request
matt fair brown	S120-04-C7094	on request	on request	on request
matt fair grey	S120-04-C7101	on request	on request	on request

Matte colors

matt manhattan	S120-04-C6874	on request	on request	on request
matt pergamum	S120-04-C7098	on request	on request	on request
matt sanitary grey	S120-04-C6834	on request	on request	on request
matt silk grey	S120-04-C7110	on request	on request	on request
matt silver grey	S120-04-C6645	on request	on request	on request
matt snow white	S120-04-C6832	on request	on request	on request
matt white	S120-04-C6919	on request	S120-08-C6919	on request
Pieces per packaging unit	**20**	**20**	**20**	**1**
Pieces per pallet	**1200**	**900**	**600**	**16**

Due to typographical reasons the colours shown below may differ from the original colours of the products.
For an exact colour display please request our original colour charts.

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.

Brand information

EMICODE® is a registered trademark of GEV e. V. (Düsseldorf, Germany)

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.