



2-component silicone adhesive and sealant on alkoxy basis condensation curing

For indoor and outdoor application

S 81

Characteristics

- ▶ Compatible with many insulating glass edge compound materials (see compatibility list on website) - Suitable for processing insulating glass panes
- ▶ 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)
- ▶ Low odour - No odour nuisance
- ▶ Fast curing even in thick layers - Fast further processing
- ▶ Reliable curing in a defined period of time - Predictable handling and functional strength
- ▶ High elongation stress value - High stability of the adhesion
- ▶ High resistance to notches and tearing - Resistant to high mechanical stresses
- ▶ Excellent weathering, ageing and UV-resistance



Fields of application

- ▶ Bonding and sealing of windows - direct glazing - bonding of insulated glass units in the window casements (PVC, wood, aluminium) - please note compatibility list.
- ▶ Suitable for the production of windows reaching standard RC 2 or RC 3 according to DIN V ENV 1627

Standards and tests

- ▶ Quality assured adhesive for glazing according to RAL GZ 716 Part 2
- ▶ Tested according to ift-guideline VE-08/4, part 1
- ▶ Tested in different systems for the bonding of burglar-resistant glazing, according to resistance class RC2 or RC3
- ▶ Qualified commentary by the eph Dresden, Germany on the execution of glass- connecting systems in burglary proved wooden windows of the resistance class RC 2, rebate bonding in combination with bonding of the glass stemming profile
- ▶ Meets the requirements for fire behavior according to EN 13501: Class E
- ▶ SKH certificate no.: SKH-041

Technical properties

Component A

| | |
|--|-----------|
| Colour | C01 white |
| Viscosity at 23 °C | pasty |
| Density component A at 23 °C according to ISO 1183-1 [g/cm³] | ~ 1,31 |
| Shelf life at 23°C/50 % RH for s-b-s ACF / BlueLine cartridge [months] | 12 |
| Shelf life at 23°C/50 % RH for coaxial cartridge [months] | 9 1 |
| Shelf life at 23 °C/50 % RH for pail/drum [months] | 9 1 |

1) from production

Component B

| | OTTOCURE S-CA 2030 | OTTOCURE S-CA 2080 |
|---|--------------------|--------------------|
| Colour | C04 black | grey |
| Viscosity at 23 °C | pasty, stable | pasty, stable |
| Density component B at 23 °C according to ISO 1183-1 [g/cm³] | ~ 1,24 | ~ 1,23 |
| Mixing ratio according to weight (base A : curing agent B) | 10,6 : 1 | 10,6 : 1 |
| Mixing ratio according to volume (base A : curing agent B) | 10 : 1 | 10 : 1 |
| Shelf life at 23°C/50 % RH for s-b-s ACF / BlueLine cartridge [months] ¹ | 12 | 12 |
| Shelf life at 23°C/50 % RH for coaxial cartridge [months] ¹ | 9 | 9 |
| Shelf life at 23 °C/50 % RH for pail/drum [months] ¹ | 9 | 9 |

1) from production

Unvulcanised compound:

| | with OTTOCURE S-CA 2030 | with OTTOCURE S-CA 2080 |
|--|-------------------------|-------------------------|
| Colour | C04 black | grey |
| Viscosity at 23 °C | pasty, stable | pasty, stable |
| Processing temperature from/to [°C] | + 5 / + 40 | + 5 / + 40 |
| Shore-A-hardness after 4 hours | ~ 7 - 20 | ~ 7 - 20 |
| Shore-A-hardness after 24 hours | ~ 38 - 45 | ~ 38 - 45 |
| Shore-A-hardness after 3 days | ~ 45 | ~ 45 |
| Pot life at 23 °C/50 % RH [minutes] | ~ 15 - 30 | ~ 15 - 30 |
| Shrinkage of volume according to ISO 10563 [%] | ~ 4 | ~ 4 |

Vulcanisate:

| | |
|---|--------------|
| Density at 23 °C according to ISO 1183-1 [g/cm³] | ~ 1,3 |
| Shore-A-hardness according to ISO 868 | ~ 45 |
| Temperature resistance from/to [°C] | - 40 / + 150 |
| Tensile strength according to ISO 37, type 3 [N/mm²] | 2,0 - 2,5 |
| Tensile expansion according to ISO 37, type 3 [%] | 200 - 400 |
| Stress expansion modulus at 100 % according to ISO 37, type 3 [N/mm²] | ~ 1,0 |

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.

| | |
|---------------------------|------------------------------|
| Aluminium anodized | 1226 |
| Aluminium powder-coated | 1226 / 1101 / T ¹ |
| Glass | + |
| Glass, enamelled | + |
| Wood, varnished / painted | 1226 / 1101 / T ¹ |

| | |
|---|------|
| Wood, untreated | + 2 |
| Insulation glass secondary edge sealing | T 3 |
| PVC unplasticized | 1226 |

1) OTTO Cleanprimer 1226 and OTTO Cleanprimer 1101 have shown to improve adhesion on coatings. It is, however, necessary to verify the proper adhesion of the adhesive in combination with OTTO Cleanprimer 1226 or OTTO Cleanprimer 1101 on the respective original substrates through adhesion tests of your own.

2) On the following kinds of wood a very good adhesion is given: oak, eucalyptus, spruce, hemlock, pine, lark, meranti, oregon, Siberian lark and sipo. The surface of the wood must be smoothened, sanded and finished for the adhesion.

3) With regard to adhesion and compatibility to materials used for insulation glass edge bonding please consult our latest compatibility overview. You can download the most recent list from our website.

+ = 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 constructional details of the bonding have to be checked with our technical service department, in particular the compatibility with contact materials, such as insulating glass edge bonds, sealants etc.

The production of windows complying to standard RC 2 or RC 3 does not only depend on the use of an adhesive and the correct application thereof but also on other constructional features in no connection with the adhesive (screwed joints, fixings etc.) The use of an adhesive alone is no guarantee for reaching standards RC 2 or RC 3.

During curing small amounts of alcohol are released.

Ensure good ventilation during application and curing.

Application information

Maximum tolerance of mixing ratio: The mixing ratios may vary by a maximum of +/- 10 % in order to have an impact on the curing time.

Avoid entrapment of air during mixing. Therefore we recommend to use a mixing equipment.

Processing of 2-component adhesives and sealants out of side-by-side cartridges:

First of all remove the lids of both component's chambers. Place cartridge into the pistol. Squeeze out material, until material comes out of both chambers. Wipe off material and attach the static mixing nozzle with help of the union nut. Check homogeneity of the mixture.

Processing of the 2-component adhesives and sealants from the coaxial cartridge:

Please note: The diameter of the pressure disc of the 1-component gun may not exceed 41 mm.

The feed rate of the pressure disc should be < 150 mm/min (do not exceed level 2 of the OTTO accumulator gun HPS-4T and HPS-6T)!

First of all the sealable cap is removed. Insert the cartridge into the gun. Squeeze out material until both components discharge material. Wipe off the material and screw on the static mixing nozzle. Check the homogeneity of the mixture. Change the static mixing nozzle if the pot time has been exceeded.

The maximum ambient temperature of 60 °C must not be exceeded while curing.

For seals in the mixing and dosing system that are in direct contact with the adhesive/sealant, we recommend using (plasticiser-free) EPDM seals or even more resistant FFKM seals. If other sealing materials are used, please consult our Application Technology department.

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.

In order to achieve optimal adhesion and good mechanical characteristics, the entrapment of air in the joint must be avoided.

Processing/smoothing: The adhesive/sealant has to be smoothened within pot life in order to ensure close contact with joint edges/substrates. OTTO Smoothing Agent shall not be used.

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.

To make sure the mixing is correct the user has to carry out accompanying quality checks during application. The according necessary tests have to be gathered from the document "Accompanying Quality Checks for the processing of 2-component Silicones", which is available from our technical department.

Packaging

| Container | Colour | Packaging unit (PU) | Pieces per pallet | Order code |
|---|------------|--|-------------------|--------------------|
| 280 ml coaxial cartridge | Black C04 | 12/Box incl. 12 static mixing nozzles MGQ 10-16D | 1248 | S81-2030-107-C04 |
| 490 ml side-by-side AFC plastic cartridge | Grey C2252 | 9/Box incl. 9 static mixing nozzles ACF 12-24X | 540 | S81-2080-43-C2252 |
| 490 ml side-by-side AFC plastic cartridge | Black C04 | 9/Box incl. 9 static mixing nozzles ACF 12-24X | 540 | S81-2030-43-C04 |
| 490 ml BlueLine plastic cartridge | Grey C2252 | 8/Box incl. 8 static mixing nozzles MBLTX 14-16G | 480 | S81-2080-111-C2252 |
| 490 ml BlueLine plastic cartridge | Black C04 | 8/Box incl. 8 static mixing nozzles MBLTX 14-16G | 480 | S81-2030-111-C04 |
| 200 l drum (component A) | White C01 | 1 | 2 | S81-24-C01 |
| 20 l plastic pail (component B) | Black C04 | 1 | 16 | S-CA2030-10-C04 |
| 20 l plastic pail (component B) | Grey C2252 | 1 | 16 | On request |

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.