

OTTOCOLL®

S 81

Technical Datasheet

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

For indoor and outdoor application

Characteristic:

- **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 ift guideline DI-02/1**
Suitable for processing VSG
- **Very good adhesion on many substrates even without primer**
Often primerless processing possible, see primer table in technical data sheet
- **Low odour**
Convenient processing
- **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, tension and tearing**
Resistant to high mechanical stresses
- **Excellent weathering, ageing and UV-resistance**
For long-lasting indoor and outdoor applications

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.
- Bonding and sealing of glass elements (e. g. partitioning walls)
- Suitable for the production of windows reaching standard RC 2 or RC 3 according to DIN V ENV 1627

Standards and tests:

- Tested according to RAL GZ 716/1, paragraph III, part A, 3.5 and ift-guideline VE-08/1, part 1, adhesion behaviour on PVC, overlap adhesion on position 1
- Tested according to RAL GZ 716/1, paragraph III, part A, 3.5.4, floating roller peel test to determine the adhesion strength in rebate bondings
- Tested according to ift-guideline VE-08/1, part 1, adhesion behaviour on wood, overlap adhesion on position 1
- Qualified commentary by the eph Dresden, Germany on the execution of glas- connecting systems in burglary proofed wooden windows of the resistance class RC 2, rebate bonding in combination with bonding of the glass stemming profile
- Classification according to building certification systems, see the sustainability data sheet

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.

Technical properties:

Single components:

Component A

Colour	C01 white
Viscosity at 23 °C	pasty
Density component A at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,31
Shelf life at 23 °C/50 % RH [months]	9 (1)

1) from date of manufacture

OTTOCURE S-CA 2030

Colour	C04 black
Viscosity at 23 °C	pasty, stable
Density component B at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,24
Mixing ratio according to weight (base A : curing agent B)	10,6 : 1
Mixing ratio according to volume (base A : curing agent B)	10 : 1
Shelf life at 23 °C/50 % RH [months]	9 (1)

1) from date of manufacture

OTTOCURE S-CA 2080

Colour	C2252 grey
Viscosity at 23 °C	pasty, stable
Density component B at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,23
Mixing ratio according to weight (base A : curing agent B)	10,6 : 1
Mixing ratio according to volume (base A : curing agent B)	10 : 1
Shelf life at 23 °C/50 % RH [months]	9 (1)

1) from date of manufacture

Unvulcanised compound: with OTTOCURE S-CA 2030

Colour	C04 black
Viscosity at 23 °C	pasty, stable
Processing temperature from/to [°C]	+ 5 / + 40
Shore-A-hardness after 2 hours	~ 7 - 20
Shore-A-hardness after 24 hours	~ 38 - 45
Shore-A-hardness after 3 days	~ 45
Pot life at 23 °C/50 % RH [minutes]	~ 15 - 30
Shrinkage of volume according to ISO 10563 [%]	~ 4

with OTTOCURE S-CA 2080

Colour	C2252 grey
Viscosity at 23 °C	pasty, stable
Processing temperature from/to [°C]	+ 5 / + 40
Shore-A-hardness after 2 hours	~ 7 - 20
Shore-A-hardness after 24 hours	~ 38 - 45
Shore-A-hardness after 3 days	~ 45

Pot life at 23 °C/50 % RH [minutes]	~ 15 - 30
Shrinkage of volume according to ISO 10563 [%]	~ 4

Vulcanisate:

Density at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,3
Shore-A-hardness according to ISO 868	~ 45
Temperature resistance from/to [°C]	- 40 / + 150
Tensile strength according to ISO 37, S3A [N/mm ²]	2,0 - 2,5
Tensile expansion according to ISO 37, S3A [%]	200 - 400
Stress expansion modulus at 100 % according to ISO 37, S3A [N/mm ²]	~ 1,0

These data are not suitable for the issue of 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 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

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.

If the sealings of the mixing and dosing equipment are in direct contact with the sealant/adhesive we recommend to use EPDM-sealings (free from plasticizers). If it is the intention to use another sealing material please contact our technical 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 smoothed 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:

colour	280ml coaxial cartridge	
 black	S81-2030-107-C04	
Packaging unit	12/Box incl. 12 static mixing nozzles	
Pieces per pallet	1.248	
colour	490ml side-by-side plastic cartridge	490ml BlueLine plastic cartridge
 grey	S81-2080-43-C2252	S81-2080-111-C2252
 black	S81-2030-43-C04	S81-2030-111-C04
Packaging unit	9/Box incl. 9 static mixing nozzles	8/Box incl. 8 static mixing nozzles
Pieces per pallet	540	480
colour	200l drum (component A)	20l plastic pail (component B)
 grey	S81-24-C01	S-CA2080-10-C2252
 black	S81-24-C01	S-CA2030-10-C04
Packaging unit	1	1
Pieces per pallet	2	16

One cardboard box with 280 ml of coaxial cartridges contains 12 MGQ 10-16D static mixing nozzles

One cardboard box with 490 ml of side-by-side cartridges contains 9 MFQX 10-24T static mixing nozzles

One cardboard box with 490 ml of BlueLine cartridges contains 8 MBLTX 14-16V static mixing nozzles

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 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. You can find our general terms and conditions on our homepage: <http://www.otto-chemie.de/en/terms-and-conditions>