

# OTTOCOLL®

## S 610

### Technical Datasheet

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

For indoor and outdoor application

#### Characteristic:

- **Compatible with PVB sheets according to ift guideline DI-02/1**  
Suitable for processing VSG
- **Non-corrosive**  
No (oxidation) corrosion on unprotected metal surfaces
- **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 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:

- Elastic bonding and sealing of various materials, e. g. glass, wood, metal and plastics
- Elastic bonding of mirrors on ceramic, glass, plastic, stainless steel, aluminium, wood, concrete etc.
- Also suitable as adhesive for acrylic glass mirrors (e. g. Plexiglas®)
- Not suitable for the structural bonding of structural glazing units

#### Standards and tests:

- Suitable for applications according to IVD instruction sheet no. 30+31+35 (IVD = German industry association sealants)
- French VOC-emission class A+
- 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.

During curing small amounts of alcohol are released.  
Ensure good ventilation during application and curing.

#### Technical properties:

#### Single components:

## Component A

Colour	white
Viscosity at 23 °C	pasty
Density at 23 °C according to ISO 1183-1 [g/cm <sup>3</sup> ]	~ 1,31
Shelf life at 23 °C/50 % RH [months]	9

## OTTOCURE S-CA 2030

Colour	black
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm <sup>3</sup> ]	~ 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	grey
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm <sup>3</sup> ]	~ 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	black
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm <sup>3</sup> ]	~ 1,30
Processing temperature from/to [°C]	+ 5 / + 40
Shore-A-hardness after 4 hours	~ 13 - 23
Shore-A-hardness after 24 hours	~ 37 - 43
Shore-A-hardness after 3 days	~ 45
Pot life at 23 °C/50 % RH [minutes]	~ 25 - 50
Shrinkage of volume according to ISO 10563 [%]	~ 4

## with OTTOCURE S-CA 2080

Colour	grey
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm <sup>3</sup> ]	~ 1,30
Processing temperature from/to [°C]	+ 5 / + 40
Shore-A-hardness after 4 hours	~ 13 - 23
Shore-A-hardness after 24 hours	~ 37 - 43
Shore-A-hardness after 3 days	~ 45
Pot life at 23 °C/50 % RH [minutes]	~ 25 - 50
Shrinkage of volume according to ISO 10563 [%]	~ 4

## Vulcanisate:

Density at 23 °C according to ISO 1183-1 [g/cm <sup>3</sup> ]	~ 1,30
Shore-A-hardness according to ISO 868	~ 45
Temperature resistance from/to [°C]	- 40 / + 180
Tensile strength according to ISO 37, S3A [N/mm <sup>2</sup> ]	2,0 - 3,0
Tensile expansion according to ISO 37, S3A [%]	250 - 400
Permissible movement capability [%]	20
Retroactivity according to ISO 7389 at 50 % expansion [%]	> 90

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.

ABS	T
Acrylic glass/PMMA (Plexiglas®, etc.)	1217 / T
Aluminium	+
Aluminium anodized	+ / 1101
Aluminium powder-coated	+ / 1101 / T
Concrete	1105
Stainless steel	+ / 1101
Glass	+
Glass, coated	+ / T
Wood, untreated	+ / 1215 / 1105 (1)
Cellular concrete	1105
Plaster	1105
PVC unplasticized	1226
Zinc, galvanised iron	+ / T

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

+ = good adherence without primer

- = not suitable

T = Test/pilot test advised

#### Application information:

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.

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 as mirror adhesive:

Only mirrors should be bonded, which have a reflecting and protection layer according to DIN 1238 5.1 and DIN EN 1036. In case of doubt please contact the manufacturer of the mirror.

The following indications are effective for mirrors made of glass as well as for mirrors made of plexiglass.

For the combination with anti-splinter foils and similar, please contact our technical department or carry out preliminary tests.

Mineral substrates such as concrete, plaster, masonry, gypsum board, cellular concrete as well as untreated wood have to be primed with OTTO Primer 1105. This is essential. The use of this primer as barrier does not only improve the adhesion, but it is also a barrier to alkaline. Without a barrier the alkaline in combination with moisture can (amongst others) damage the back side of the mirror.

When bonding mirrors do not apply the adhesive point-shaped or full-surface, but in vertical stripes (beads). The length of a bead should not exceed 200 mm. 3 beads are to be applied per m<sup>2</sup> in a way, that after pressing on the mirror the width of the bead does not exceed 10 mm and the space between the beads is of at least 200 mm. This will make the necessary air circulation for the vulcanization

possible. For an ideal loading capacity an adhesion surface of minimum 10 cm<sup>2</sup> / kg of the mirror's weight is necessary.

In order to avoid the confinement of the splitting product, a minimum space of 1,6 mm between mirror and substrate has to be kept mandatory. This space can be avoided most purposefully by sticking spacers onto the mirror. The minimum space specified serves the outbreathing of the splitting product. It does however not overrule the minimum distances for ventilation given by the Institute of Glass Manufacturing in Hadamar.

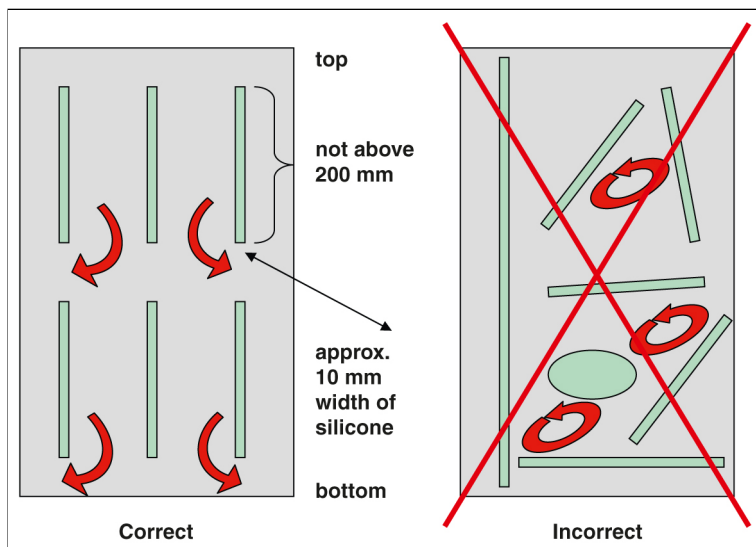
When bonding Plexiglas® mirrors we recommend an adhesion test on the mirror laque layer. To ensure free ventilation of the splitting product a distance between mirror and substrate has to be kept. The mechanical strength, necessary for the bonding, will be achieved after approx. 8 hours (+23 °C, 50 % RH). Until this point a mechanical fixation is necessary. This can be done with removable mechanical fixations, e.g. blocks of wood, wedges or single sided adhesive tapes used at the front of the mirror or with double sided adhesive tapes applied to the back of the mirror.

OTTOSEAL® S 70 is recommended for sealing the edges of a mirror adjacent to natural stone.

OTTOSEAL® S 120 and OTTOSEAL® S 121 is recommended for sealing the edges of a mirror adjacent to other materials such as ceramic, metal, glass etc.

Please note that the sealing must be effected after has completely cured and the splitting product has escaped. This takes approx. 3 days. An immediate sealing is possible, if one edge of the mirror stays open in order to make the escape of the splitting product possible. On mirrors without a back out of glass only the vertical edges should be sealed to avoid a damage of the mirror coating due to formation of condensation.

An immediate sealing is possible if one edge of the mirror stays open in order to make an evaporation of the splitting product possible.



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

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.

#### Packaging:

	490 ml side-by-side plastic cartridge
black	S610-2030-43-C04
fair grey	S610-2080-43-C5200
<b>Packaging unit</b>	<b>9/Box incl. 9 static mixing nozzles*</b>
<b>Pieces per pallet</b>	<b>540</b>

\*OTTO Static mixing nozzle MFQX 10-24T

**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>