

OTTOCOLL®

M 580

Technical Datasheet

2-component hybrid polymer STP adhesive

For indoor and outdoor application

Characteristic:

- **Silicone-free**
- **Free of isocyanates**
- **Very good adhesion on many substrates even without primer**
Often primerless processing possible, see primer table in technical data sheet
- **Low odour**
Convenient processing
- **Extremely fast curing even in thick layers**
Very fast further processing
- **Reliable curing in a defined period of time**
Predictable handling and functional strength
- **Compatible with coatings according to DIN 52452**
No interaction with existing and adjacent coatings
- **Can be painted and varnished – please observe application instruction in Technical Data Sheet**
Optical adaptation and protective coating possible
- **Good weathering and ageing resistance**
For long-lasting indoor and outdoor applications
- **Stress-compensating**
Compensates movements
- **Vibration tolerant**
Compensates for dynamic forces

Fields of application:

- Elastic bonding and mounting of various materials such as wood, derived wood products, glass, metals (e. g. aluminium, stainless steel, anodising aluminium, brass, copper), plastics (e. g. unplasticised PVC, plasticised PVC, fibrereinforced plastics etc.), mineral substrates (e. g. brick, tile, ceramic), fireproof building panels (gypsum board etc.)
- Elastic bonding of mirrors on ceramic, glass, plastic, stainless steel, aluminium, wood, concrete etc.
- For the bodywork and vehicle construction, waggon and container construction, metal construction and apparatus engineering, ship building
- Sealing of air condition and ventilation systems
- Bonding of ceramics
- Bonding of door fillings covering the complete door

Standards and tests:

- Suitable for applications according to IVD instruction sheet no. 30+35 (IVD = German industry association sealants)
- French VOC-emission class A+
- Declaration in "baubook" Austria
- Classification according to building certification systems, see the sustainability data sheet

Important information:

Fully covering door fillings We, being the manufacturer, can only assume liability for the product properties of our adhesive. It is therefore the sole responsibility of the user to guarantee the functionality of the construction as a whole over the total life cycle of the construction unit through an adequate

planning and the execution of regular checks. Preliminary tests are obligatory in any case.

The application of the adhesive and the subsequent jointing of the door panelling covering the wing with the frame must always be completed before the pot life has been achieved. Depending on the ambient conditions, this time is between 5 and 10 minutes. In order to achieve the optimum adhesive results, in addition to the homogenous mixture of the two components, the surfaces to be stuck together must be sufficiently moistened. The bead of adhesive must not be grouted too hard on a too-thin layer thickness when joining the parts by pressing them too hard. Depending on the material combinations used and the conditions of use, we recommend an adhesive layer thickness of no less than 1 mm. The OTTOTAPE fixing tape can be used to maintain the minimum layer thickness.

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.

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

For bonding or sealing of glass which is exposed to UV-radiation we recommend the use of our high quality silicone adhesives / sealants such as OTTOSEAL® S 110 / S 120 (for sealing of glazing rebate), OTTOSEAL® S 10 (e.g. for bonding), OTTOSEAL® S 7 (for weathersealing) or OTTOCOLL® S 81 (for bonded windows).

For bonding or sealing of transparent plastic material, such as acrylic glass, exposed to UV-radiation we recommend our silicone sealant OTTOSEAL® S 72.

Not suitable for sealing / bonding copper upon impact of UV-radiation and temperature.

During curing small amounts of alcohol are released.

The colours of the sealant may be affected by environmental influences (high temperature, chemicals, vapours, UV-radiation). This does not affect the characteristics of the product.

Technical properties:

Single components:

Component A

Colour	white
Viscosity at 23 °C	pasty
Density at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,21
Shelf life at 23 °C/50 % RH for cartridge [months]	9 (1)
Shelf life at 23 °C/50 % RH for pail/drum [months]	6 (1)

1) from date of manufacture

Component B

OTTOCURE M-CA 4005

Colour	light grey
Viscosity at 23 °C	pasty
Density at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,52
Mixing ratio according to weight (base A : curing agent B)	1 : 1,256
Mixing ratio according to volume (base A : curing agent B)	1 : 1
Shelf life at 23 °C/50 % RH for cartridge [months]	9 (1)
Shelf life at 23 °C/50 % RH for pail/drum [months]	6 (1)

1) from date of manufacture

Unvulcanised compound:

with OTTOCURE M-CA 4005

Colour	light grey
Viscosity at 23 °C	pasty
Density at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,37
Processing temperature from/to [°C]	+ 5 / + 40
Shore-A-hardness after 4 hours	~ 25
Shore-A-hardness after 24 hours	~ 32
Pot life at 23 °C/50 % RH [minutes]	~ 5 - 10
Functional strength [minutes]	~ 25 - 40

Vulcanisate:

Shore-A-hardness according to ISO 868	~ 37
Temperature resistance from/to [°C]	- 40 / + 80
Tensile strength according to ISO 37, S3A [N/mm ²]	~ 1,7
Tensile expansion according to ISO 37, S3A [%]	~ 300
Stress expansion modulus at 100 % according to ISO 37, S3A [N/mm ²]	~ 0,8

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.

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	+ / 1226
Aluminium anodized	+
Aluminium powder-coated	T / 1101 / 1217 / 1225
Concrete	1105 / 1218
Concrete block	-
Lead	T
Stainless steel	+ / 1101
Iron	T
Glass	+ / 1226
Wood, painted (solvent systems)	+ / 1226
Wood, painted (aqueous systems)	+ / 1226
Wood, varnished (solvent systems)	+ / 1226
Wood, varnished (aqueous systems)	+ / 1226
Wood, untreated	T
Ceramic, glazed	+ / 1101
Ceramics, unglazed	+ / 1101
Natural stone / marble	-
Plaster	1105 / 1215
PVC unplasticized	1217 / 1227
PVC-soft-foils	T / 1217
Zinc, galvanised iron	+ / 1226

+ = good adherence without primer

- = not suitable

T = Test/pilot test advised

Application information:

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. Check homogeneity of the mixture.

Component A is sensitive to atmospheric humidity and therefore must be protected from moisture.

Component B does not react with atmospheric humidity and is stable under normal conditions (23 °C, 50 % RH).

The longer it is kept in storage, the more likely the B component is to undergo a slight phase separation. In this case a small amount should be carefully extruded from the double cartridge until both components are homogeneous as they come out of the double cartridge. In the case of hobbocks the

separation which occurs must be discarded. Thereafter the material can be processed without any problems.

In order to achieve good adhesion and good mechanical properties air entrapment 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.

Our product can be overcoated with paint or varnish. The compatibility between the coating and our product has to be checked before the application by the user/processor - possibly under production conditions. Our OTTO application technology will gladly support you non-committally. If, in exceptional cases, after successful compatibility test our product is coated over the entire surface, this coating must also be able to follow the elastic movement of the sealant. Otherwise crack formations in the coat of paint or optical impairments may occur.

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.

Due to the many possible influences during and after application, the customer always has to carry out trials first.

Protective goggles must be worn when working with the product. Maximum working pressure 5 bar when working with the product using compressed air guns.

Packaging:

	2x190 ml plastic twin cartridge	2x310 ml plastic twin cartridge
fair grey	M580-4005-15-C5195	M580-4005-16-C5195
Packaging unit	10/Box incl. 10 static mixing nozzles*	10/Box incl. 10 static mixing nozzles*
Pieces per pallet	600	600

*OTTO Static mixing nozzle MGQ 10-19D

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>