

OTTOCOLL® M 580 SPECIAL

The extremely fast 2-component hybrid adhesive



2-component hybrid polymer STP adhesive

For indoor and outdoor application

M 580

Characteristics

- ▶ Extremely fast hardening - Stress can be applied to the bond extremely quickly
- ▶ Very good adhesion on many materials - Can be used on many materials without pretreatment
- ▶ Elastic - Compensates movements
- ▶ Can be painted and varnished – please observe application instruction in Technical Data Sheet
- ▶ Silicone-free
- ▶ Free of isocyanates

Fields of application

- ▶ Bonding of leaf covering door panels
- ▶ Bonding of mirrors on ceramic, glass, plastic, stainless steel, aluminium, wood, concrete, etc.
- ▶ Bonding of window sills, floor strips, decorative strips and stairs
- ▶ Bonding in body and vehicle construction, carriage and container construction, metal and device construction, shipbuilding
- ▶ Bonding and mounting different materials, such as wood, wooden materials, plastics, metals and mineral substrates

Standards and tests

- ▶ Meets the requirements for fire behavior according to EN 13501: Class E
- ▶ French VOC-emission class A+
- ▶ Declaration in "baubook" Austria
- ▶ Suitable for applications according to IVD instruction sheet no. 30+35 (IVD = German industry association sealants)

Technical properties

Single components:

Component A

Colour	white
Viscosity at 23 °C	pasty
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,21
Shelf life at 23 °C/50 % RH for cartridge [months]	12 ¹
Shelf life at 23 °C/50 % RH for pail/drum [months]	6 ¹

1) from production

Component B

OTTOCURE M-CA 4005

Colour	fair grey
Viscosity at 23 °C	pasty
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,52

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Application advice
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SEALING & BONDING



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]	12 ¹
Shelf life at 23 °C/50 % RH for pail/drum [months]	6 ¹

1) from production

Unvulcanised compound: with OTTOCURE M-CA 4005

Colour	fair 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, type 3 [N/mm ²]	~ 1,7
Tensile expansion according to ISO 37, type 3 [%]	~ 300
Stress expansion modulus at 100 % according to ISO 37, type 3 [N/mm ²]	~ 0,8

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.

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

Important information

Leaf covering door panels 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 leaf covering door panel 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.

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 hobbicks 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 smoothened 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.

Paints, lacquers, plastics and any other coatings must be compatible to the adhesive/sealant. Materials with alkaline contents may cause interactions in the form of discolouration.

Pure mineral paints (e.g. based on potassium silicate or lime) are not suitable for painting over the entire surface due to the brittleness of the paint.

Depending on the climatic conditions and the type of painting, the coating materials can be reworked from about 1 hour.

In contact with oxidatively curing paints (e.g. alkyd resin paints) drying and curing can be delayed or prevented.

We recommend preliminary tests.

Coatings and their evaporation can lead to discolouration of the adhesive/sealant.

Discolouration of coatings due to interaction with the adhesive/sealant is not excluded.

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
Pieces per packaging unit	10	10
Pieces per pallet	600	600

1 OTTO static mixing nozzle MGQ 10-19D is supplied with each cartridge.

Due to typographical reasons the colours shown below may differ from the original colours of the products.

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.