

**OTTOCOLL®****M 501**

Technical Datasheet

**1-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
- **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

## 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.)
- For the bodywork and vehicle construction, waggon and container construction, metal construction and apparatus engineering, ship building
- Bonding of stone, natural stone and ceramic
- Different building applications such as staircase construction etc.

## Standards and tests:

- Suitable for applications according to IVD instruction sheet no. 12+19-1+24+30+35 (IVD = German industry association sealants)
- French VOC-emission class A+
- EMICODE® EC 1 Plus - very low emission
- Classification according to building certification systems, see the sustainability data sheet

## Important information:

EMICODE® is a registered trademark of GEV e. V. (Düsseldorf, Germany)

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.

Changes to the product properties (e.g. colour, mechanical properties) caused by external influences (especially by translucent substrates or wide adhesive joints) by, for instance, UV-radiation and higher temperatures) can not be excluded. The adhesive joint has to be made accordingly.

Through contact with non-ferrous metals colour-changes of the adhesive (especially for full-surface bondings) can not be excluded.

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

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:**

Skin-forming time at 23 °C/50 % RH [minutes]	~ 45
Curing in 24 hours at 23 °C/50 % RH [mm]	~ 2 - 3
Processing temperature from/to [°C]	+ 5 / + 40
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,1
Shore-A-hardness according to ISO 868	~ 55
Stress expansion modulus at 100 % according to ISO 37, S3A [N/mm²]	~ 1,9
Tensile expansion according to ISO 37, S3A [%]	~ 170
Tensile strength according to ISO 37, S3A [N/mm²]	~ 2,8
Temperature resistance from/to [°C]	- 40 / + 90
Shelf life at 23 °C/50 % RH [months]	9 (1)

1) from date of manufacture

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 dust and grease as well as 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.

Acrylic glass/PMMA (Plexiglas®, etc.)	1217 / OTTOSEAL S 72
Aluminium	+
Aluminium anodized	+ / 1226
Concrete	1225
Stainless steel	+ / 1216
Epoxid resin coating	+
Fibre cement	1225
Glass	+
Wood, untreated	+ (1)
Ceramic, glazed	+
Ceramics, unglazed	+ / 1215
Copper	+ / 1226 (2)
Brass	+ / 1226
Natural stone	+ / 1216 (3)
Polypropylene	-
Cellular concrete	1105
Zinc, galvanised iron	1226

- 1) Upon high exposure to water please contact our Technical Department.
- 2) Not suitable for the sealing of covering plates made of copper.
- 3) Only suitable for bondings. For sealings we recommend our OTTOSEAL® S 70.

+ = good adherence without primer  
 - = not suitable  
 T = Test/pilot test advised

**Application information:** In order to achieve optimal adhesion and good mechanical characteristics, the entrapment of air in the joint must be avoided.  
 Curing time can be reduced by humidification and increased temperatures.  
 For the full-surface bonding of steam-tight substrates the adhesive should be moistened.  
 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 succesful 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.  
 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:		310 ml cartridge
	transparent	M501-04-C00
	<b>Packaging unit</b>	<b>20</b>
	<b>Pieces per pallet</b>	<b>1200</b>

**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>

