

OTTOCOLL®**M 501****Technical Datasheet****Characteristics:**

- 1-component sealant based on silane-terminated polymers (hybrid)
- Excellent primerless adhesion on numerous substrates - even when exposed to water
- Free of isocyanates
- Silicone-free
- Odourless
- Good weathering and ageing resistance
- Very high mechanical strength, resistance to notches, tension and tearing
- Compatible with coatings according to DIN 52452

Fields of application:

- Stress-compensating 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:

- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
- "Especially recommendable economic building material" according to building material list (TOXPROOF) of the TÜV Rheinland, Germany

Important information:

Before applying the adhesive / sealant the user has to ensure that the materials in the area of contact (solid, liquid and gaseous) are compatible with the adhesive / sealant and do not damage or alter (e. g. discolour) them. As for the materials that will be used at a later stage in the surrounding area of the adhesive / sealant 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 adhesive / sealant. 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 of product properties (e. g. colour, mechanical properties) caused by external influences e. g. UV-radiation (through translucent substrates) can not be excluded. The 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

Technical properties:

Skin-forming time at 23 °C / 50 % RAH	approx. 45 minutes
Curing in 24 hours at 23 °C / 50 % RAH	approx. 2-3 mm



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Sealants • Adhesives

Processing temperature	+5 °C up to +40 °C
Viscosity (23 °C)	stable, pasty
Density at 23 °C	approx. 1,06 g/cm ³
Stress expansion modulus at 100 % (DIN 53 504, S3A)	approx. 1,9 N/mm ²
Breaking expansion (DIN 53 504, S3A)	approx. 170 %
Tensile strength (DIN 53 504, S3A)	approx. 2,8 N/mm ²
Temperature resistance	-40 °C up to +90 °C
Shelf life at 23 °C, 50 % RAH	9 months

These data are not suitable for the issuing 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

+ = good adherence without primer

- = not suitable

T= Test/pilot test advised

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

2) See "Important information"

3) Only suitable for bondings. For sealings we recommend our OTTOSEAL® S 70.

The OTTO Primer 1215, 1217 and 1218 are subject to the obligation to inform and to keep records according to the Regulation of Chemical Interdiction (amongst others prohibition of self service) since 01.11.2005. Please observe the Technical Data Sheets (www.otto-chemie.de).

Application information:

In order to achieve optimal adhesion and good mechanical properties trapping of air should be avoided. Curing speed can be reduced by humidification and increased temperatures. For the full-surface bonding of steam-tight substrates the adhesive should be moistened. Because of the variety of possible influences while processing and applying customer tests are required.

Please observe the recommended shelf life which is printed on the packaging.
We recommend to store our products in unopened original packagings dry (< 60 % RAH) 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: Please see the packagings available from stock in our current General Catalogue for Building Products.

Trading unit/Container	Packaging unit	Pieces per pallet
310 ml cartridge	20	1200

Colours: C00 transparent

Safety precautions: Please observe the material safety data sheet.

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 experiences. However, since conditions and methods of use and application of our products are beyond our control, we suggest you to 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. If you happen to not have our general terms and conditions at hand, we will gladly send them to you upon request. You can also find them on our homepage: http://www.otto-chemie.de/englisch/unternehmen/agb/AGB-Englisch_04-05.pdf

