

OTTOCOLL®

P 410

Technical Datasheet

1-component polyurethane adhesive flowable

For indoor and outdoor application

Characteristic:

- **Resistant to run-off water according to DIN EN 204 stress group D4**
Tested for indoor and outdoor applications
- **Non-corrosive**
No (oxidation) corrosion on unprotected metal surfaces
- **Fast curing**
Short pressing and fixing times
- **Long open time**
Long processing time, among other things, well suited for automated processing via dosing systems
- **Only for commercial users. Please observe the material safety data sheet.**

Fields of application:

- Manufacturing sandwich / composite boards, e. g. for partition walls, door parts, exterior walls for prefabricated houses, façade elements, vehicle superstructural parts etc.
- Bonding of large-surface elements, e. g. for prefabricated houses, caravan and container construction
- Manufacturing garden furniture and window edges

Standards and tests:

- According to the requirements of DIN EN 204-D4 to weathering resistant bondings of wood and derived wood products
- According to the requirements of DIN EN 14257 (WATT 91) to temperature-resistant bondings of wood and derived wood products
- Suitable for applications according to IVD instruction sheet no. 30+35 (IVD = German industry association sealants)
- Conform to LEED® v3 IEQ-credits 4.1 adhesives and sealants
- French VOC-emission class A+

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.

For adhesion in external areas with impact of humidity and/or UV-radiation in external areas we recommend the use of hybrid-adhesives such as OTTOCOLL® M 500, OTTOCOLL® AllFlex, OTTOCOLL® HiTack, OTTOCOLL® M 590 or OTTOCOLL® M 570. This excludes weathering-stressed adhesion of wood and wood derived timber products with subsequent protective coating according to DIN EN 204 D 4.

Paints, lacquers, plastics and any other coatings must be compatible to the adhesive/sealant. In case of full-surface bonding of two large vapour-impermeable substrates (e. g. door sandwich panels, 2x1 m) make sure the emerging CO₂ can discharge (e. g. by applying slots) to prevent the formation of bubbles. As an alternative to 1-component polyurethane adhesives the 2-component polyurethane adhesive OTTOCOLL® P 520 can be used, which cures without releasing CO₂.

Clean the tools, e.g. spatula, with OTTO Cleaner MP before the adhesive has cured.
 The cured adhesive can only be removed mechanically.
 Not suitable for the bonding of glass, polyethylene (PE), polypropylene (PP), polyamide (PA), polyfluoroethylene (PTFE), bituminous, waxy or oily substrates or similar.
 In case of UV-radiation stress discolourations may occur.

Technical properties:

Open time at 23 °C/50 % RH [minutes]	80
Processing temperature from/to [°C]	+ 5 / + 35
Temperature resistance from/to [°C]	- 30 / + 80 (1)
Viscosity at 23 °C [mPas]	~ 7000
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,1
Pressing time at 23 °C [minutes]	~ 240 (2)
Pressure, max. [kg/cm²]	8 (3)
Coverage of adhesive [g/m²]	~ 150 - 250
Recommended wood humidity [%]	~ 8 - 16
Shelf life at 23 °C/50 % RH [months]	9

- 1) temporarily + 100 °C
- 2) Pressing time can be reduced by humidification and increased temperatures.
- 3) With usual pressing tools and depending on type of application

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.
 The adherent surfaces have to be clean, free from dust and grease as well as sustainable.

Application information:

Cures by reaction with humidity. During curing, a small amount of CO₂ is released. This results in an increase of volume of the adhesive.
 It is sufficient to apply the adhesive on one side. Spread the adhesive with a spatula full surface.
 One of the substrates should be porous respectively permeable to water vapour.
 Curing time can be reduced by humidification and increased temperatures.
 The moisture necessary for curing can be achieved by slightly spraying with water. The adherent surfaces may be moist, but not wet. The parts should be assembled immediately if possible, at the latest however within the skin-forming time.
 Fix the substrates, which are to be bonded, until the adhesive is completely cured.
 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:

	12 l plastic canister	200 l tin drum with lid and tap holes	1,000 l container
brown	P410-32-C05	on request	on request
Packaging unit	1	1	1
Pieces per pallet	40	-	1

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>