

Technical Data Sheet

technicoll® 8311

Universal 1-component PUR adhesive, solvent-free



Field of application

technicoll® 8311 is a liquid, multipurpose adhesive for sandwich bondings of rigid foams. Moisture cures technicoll® 8311 the adhesive thus slightly foams and forms a relatively compact, impact-resistant gap. Take note of the “general indications”.

Handling data and product data

Base	polyurethane
Viscosity (+20 °C)	approx. 7200 mPas
Open time (+20 °C / 50% humidity)	approx. 45 minutes
Open time (spray on with water)	approx. 15 minutes
Density	approx. 1.1 g/cm ³
Colour	yellow-brown
Consumption	approx. 150 – 200 g/m ²
Way of application	one-sided with roller or toothed trowel
Cleaning agent / material	technicoll® 8363 technicoll® 9901 (metal cleaning spray) technicoll® 9902 (plastics cleaning spray)
Cleaning agent / tool	technicoll® 8362, technicoll® 9901 (spray)
Cleaning	Cured adhesive can only be removed mechanically.
Maximum time of storage	At least 2 years when stored in sealed original packaging in cool and dry places. Close opened containers airtight, protect from moisture and use the content as quickly as possible.
Preferred storage temperature	+10 °C to +25 °C
Behaviour at low temperature	Not susceptible to frost. Densification at low temperature. Once adjusted to processing temperature: fully employable.

Favoured substrates

- painted, coated surfaces
- thermosets (FRP, SMC, HPL)
- gypsum cardboard & gypsum fibreboard
- derived timber products
- cement bonded materials
- rigid foam (made of PS, PUR, PVC, ...)
- stone, ceramics

Not suitable for: PE, PP, PTFE (Teflon®), POM, silicone, EPDM, PVC-p (faux leather)

Due to the large variety of possible materials and differences in adhesion behaviour hazard tests are mandatory before introducing the adhesive into the actual production process.

General indications

technicoll® 8311 crosslinks under the influence of humidity to a solid, flexible film. Humidity in the substrates or in the air can be sufficient. In practice, moisture is added by means of a water spray. The amount of humidity determines the open time and the required pressing times. The times specified are approximate values. Once those time intervals have passed, strength is generally achieved which makes it possible to process the bonded parts further. It is suggested to determine the exact times for each concrete application by performing suitability tests. During the process of hardening, the adhesive expands as it produces carbon-dioxide (small amounts of CO₂). Foaming behaviour depends on the amount of adhesive applied, on the degree of humidity and pressure. It is usually advantageous that the gaps are well filled this way. Please bear in mind that adhesive might leak from the gaps.

Surface preparation

Bonding surfaces must be dry and clean, especially free of oil, grease or solvents. In many cases, surface roughening prior to bonding improves strength of bonded joint. It should be checked in each individual case, if it is necessary to achieve the desired strengths.

Moisture supply

The moisture necessary for curing can or must, depending on the application, be added by lightly spraying water. Usually, water is sprayed onto applied adhesive film (in particular cases on the opposite side). The bonding surfaces should not be wet, but can be a little moist. An amount of water of about 30 g/m² is sufficient.

technicoll® 8311 requires sufficient moisture to cure. Supply moisture by lightly spraying water, when working with dense substrates, as those do not provide moisture on their own. This might also apply to other cases in order to achieve a faster setting of the adhesive and to neglect the natural fluctuations in the degree of humidity!

Adhesion

Apply technicoll® 8311 by means of a nozzle (cartridge) and, depending on application, spread with toothed trowel. If you need to apply larger amounts more frequently, you may use barrels with barrel pumps.

Join materials right after applying adhesive (or spraying water) and during the „open time“. Fix substrates under pressure until adhesive is set. The amount of pressure and pressure procedure depends on the type and size of the substrates. The adhesive itself does not need pressure in order to get set, it only needs a fixing pressure in order to keep the substrates in contact.

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Press times

The press times depend on temperature and the degree of moisture.
In case water has been sprayed, the following approximate values apply:

+20 °C	approx. 90 minutes
+40 °C	approx. 60 minutes
+60 °C	approx. 30 minutes

Once those time interval have passed, strength is generally achieved which makes it possible to process the bonded parts further. Final curing strength is only achieved after a few days!

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Deviating information of earlier versions is invalid.

Special notice:

All information given on this data sheet is based on our knowledge and experience at the time of printing. The information is not binding. We advise to determine the suitability of our products with respect to their intended use and method of application. Therefore, a warranty claim cannot be granted.