

KLEIBERIT 510.3

1C PUR adhesive

Fields of application

- General surface and finger joint bonding of wood components
- Window and door elements manufacturing
- Layer bonding of wood based materials
- Bonding of mineral sheet materials and rigid foams

Properties of the bond

- Tested to SANS 10183-4-1: 2009, resp. EN 302-1: 2004
- The glue joint meets the requirements of SANS 10183-2 Service Class S3
- The glue joint reaches stress group D4 according to DIN EN 204 (factory test)
- The glue joint is inconspicuous (light in color), highly resistant to heat and achieves very high strength values

Properties of the adhesive

Base: polyurethane
Specific gravity: approximately 1.13 g/cm³
Colour: white to yellowish
Viscosity Brookfield RVT, 20 °C
- Sp. 4/ 20 rpm: approx. 18,500 mPa·s
Consistency: flows well
Open time: approx 25 mins (20°C, 50% rel. humidity)

Identification: identification is required according to EU regulations, contains 4.4 diphenylmethane diisocyanate (see our safety data sheet)

Note: Intended for commercial use only.

Application techniques

Processing conditions:

The temperature of both materials to be processed and the room in which they are contained, must measure at least +20 °C.

For load bearing bonds, the moisture content of the wood must be between 8% and 15%.

The wood moisture content of the applicable construction product norms must be complied with.

For non-load bearing bonds, the wood moisture content should be between 6% and max 15%, depending on the particular application

The surfaces to be bonded must be clean and free from grease and any separating agent.

Application methods:

- Manually with spatula or hand roller
- Automatically using an application plant

To protect the adhesive from the effects of moisture, ensure that the whole system is absolutely air-tight.

Application:

Single-sided application is sufficient.

The required application quantity depends on material characteristics of the materials to be bonded and on tolerances and joint thickness in individual cases. The maximum joint thickness cannot exceed 0.3 mm. The minimum application amount is 100 g/m² for 0.1 mm joint thickness and 350 g/m² for 0.3 mm joint thickness.

A slight squeeze-out of adhesive during pressing is an indication that the correct amount of adhesive has been applied.

A slight escape of adhesive during pressing is an indication that the correct amount of adhesive has been applied.

Maximum Waiting Time:

Approx. 25 minutes at approx. 20 °C, 50% relative humidity.

This period will be reduced by high room temperatures, a high level of humidity or exposure to moisture. Ensure that the adhesive is in good condition before pressing starts.

Curing:

When exposed to humidity (e.g. from the air or materials being bonded), the adhesive will foam lightly and then cure (harden) to a water resistant, tough-elastic adhesive film.

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Pressing the parts:

All machine components which will make contact with the adhesive must first be treated with separating agent KLEIBERIT 885.0, before the bonding process is started. Cross-linking must take place whilst the parts are being subjected to enough pressure to ensure sufficient contact between the surfaces being bonded. The pressure necessary is dependent upon the type and size of the materials, however it should measure at least 0.6 N/mm² and not exceed 1.0 N/mm². It should be ensured that the joints fit well.

Pressing time for 0.1 mm joint:

The pressing time is dependent upon temperature, moisture supply and groove thickness. The minimum pressing time for straight components with a medium moisture content of 12% and an indoor climate of 20°C and 65 % relative humidity is 1 hour. Exact times must be established for the particular application according to current requirements, in agreement with the adhesive-technical consultation.

Final curing time for 0.1 mm joint:

Following pressing, a curing time of 10-12 hours at 20°C is recommended. Depending on the shape of the parts to be pressed and possible fluctuation in the storage climate during curing, this time can be shorter or longer. Therefore, it is necessary to conduct your own testing according to the respective application and to document the results in written form.

Subsequent processing of bonded parts

After curing, the parts can be processed further without delay. If further processing is required in a timeframe less than the curing time mentioned, then your own tests must be conducted to test suitability.

Note:

To ensure continuous and uniform quality of bonding, we recommend monitoring.

Adhesives and Waste Disposal

Waste Code 080501

Disposal of contents and/or containers should comply with all applicable federal, state and local regulations.
Our containers are made of recyclable material.

Cleaning

Deposits of adhesive which have not yet cured (hardened), can be removed with KLEIBERIT 820.0. Hardened adhesive, e.g. on application tools or machine parts, can only be removed mechanically.

Packaging

KLEIBERIT 510.3:

Carton with 6 dosing bottles at 0.8 kg net each
Metal pail, 20.0 kg
Metal drum, 210.0 kg net

KLEIBERIT 820.0:

Metal can, 22.0 kg net

KLEIBERIT 885.0:

Plastic pail, 5.0 kg net

Additional packaging sizes available upon request.

Storage

KLEIBERIT 510.3 can be stored in closed air-tight containers at 20 °C for approx. 12 months.

Keep in a cool and dry place and carefully protect from humidity.

This product is not frost sensitive at temperatures above -20°C.

KLEIBERIT 510.3 must be brought to room temperature before processing.

Contents of opened containers should be used as soon as possible.

Version 07/06/2019 xv, replaces previous versions

Service

Our application department may be consulted at any time without obligation. The statements made herein are based on our experience gained to date. They are to be considered as information without obligation. Please test and establish for yourself the suitability of our products for your particular purposes. No liability exceeding the value of our product can be derived from the foregoing statements. This also applies to the technical consultancy service which is rendered free of charge and without obligation.