



KLEIBERIT 304.1

Two-component glue with colourless hardener for waterproof bonding DIN/EN 204 stress classification D 4 test certificate issued by the Fensterinstitut (i.f.t), Rosenheim, Germany („window testing institute)

Fields of application

- production of window frames, doors, glued boards and similar elements made from hardwood, softwood and exotic timbers
- bonding laminate boards

Types of gluing

- warm, cold and high frequency bonding of dovetail, tenon and similar board joints and wooden components of window frames

Properties of the bond

- **KLEIBERIT 304.1** with **Hardener 304.3** meets the requirements of the DIN/EN 204 stress classification D 4. (See the i.f.t. test report no. 505 33326, dated 15.03.2007)
- high bond strength
- tough-elastic glue film minimises wear on application devices and ensures long tool life

Properties of the glue

Glue:	PVAC dispersion
Hardener:	aluminium chloride solution
Mixing ratio:	304.1 + 5 ppw 304.3
Specific weight of mixture:	approx. 1.12 g/cm ³
pH value of mixture:	approx. 3
Colour of mixture:	white
Consistency of mixture:	medium viscosity
Viscosity at 20° C (on the day of production)	
Brookfield RVT Sp. 6/ 20 rpm:	
304.1	15,000 mPa·s ± 2,000 mPa·s
304.1 + 5 ppw 304.3	approx. 10,000 mPa·s
Chalk point of mixture:	approx. +7° C

Identification:

304.1: identification not required, according to the German hazardous substances regulations GefStoffV (see our safety data sheet)

304.3: identification is required according to the German hazardous substances regulations GefStoffV as it contains aluminium chloride. Irritant. Neutralise any splashes immediately with copious amounts of water ! (See our safety data sheet)

Application methods

- manually using a brush, spatula or glue roller
- glue application machines
- apparatus for gluing tenons and dovetails

Application tools and appliances must be manufactured from V2A steel or plastic material.

Processing:

Mixing ratio for general bonding:

304.1 + 5 ppw Hardener 304.3

Mixing ratio for high frequency bonding:

304.1 + 6 ppw Hardener 304.3

Both components are mixed together using a hand drill or stirring device fitted with a stirring paddle or dispersion disc

Pot life at 20°C: approx. 1 week

Higher glue temperatures will shorten the pot life

Application temperature: 18-20°C

do not process at temperatures below +10° C

The materials to be glued must be free of dust, oil and grease, and be acclimatised to the immediate surroundings

Wood moisture for window frame production: 10-15%

Wood moisture for interior use: 8-12%

Application quantity: 120-200 g/m²

Generally, single-sided glue application is sufficient. When working with those types of wood which are more difficult to bond, application to both sides is recommended in order to improve the bonding strength

Open time: 5 - 10 min

According to the amount used and the application conditions



Klebit 304.1

Press pressure: 0.4 - 1.0 N/mm²

Press times:

Application	Temp.	Press time
joint bonding	20°C	more than 20 min
joint bonding	50°C	more than 8 min
surface bonding (HPL)	20°C	more than 30 min
surface bonding (HPL)	50°C	more than 6 min

General Information:

The press times shown above can vary according to differing room temperatures, air humidity and moisture of the wood, and also to the region of the world in which the trees were grown.

The bond will reach its final strength (to comply with DIN/EN 204) after 7 days storage at 20° C

Avoid allowing the glued material to come into contact with iron and other ferrous materials, this could cause discolouring.

Wood and wooden materials are natural products, therefore, in isolated cases discolouring can occur due to the region in which the trees were grown and the individual properties of the timber itself.

Cleaning

Application devices, machines and containers can be cleaned with water.

Packaging

KLEIBERIT Klebit 304.1 Glue:

plastic pail, 9.5 kg net
plastic pail, 26.0 kg net
one-way drum, 120 kg net
IBC plastic one-way container, 1,000 kg

KLEIBERIT Klebit 304.3 Hardener:

carton with 12 bottles at 1.30 kg net each
carton with 12 bottles at 0.5 kg net each
plastic canister, 25 kg net

Additional packaging sizes available upon request.

Storage

Both components can be stored in the original factory sealed containers for approx. 12 months at 5-25° C.

The glue should be transported and stored in frost-free conditions. To -30°C, it can be thawed again. Storage at temperatures above 25°C will alter the viscosity.

EX1110; replaces previous data sheets

Waste Disposal

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

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.