



Rakoll® ECO 4

Type of Adhesive One-component PVAc adhesive.

- Product Benefits**
- excellent water resistance
 - fast setting
 - short press time
 - it is possible to process wood species like pine or spruce with pressing times of minimum 12 minutes
 - improved adhesion on difficult wood species (oak, larch)
 - no discolouration of the glue line due to the influence of process heat (e. g. HF-press)
 - improved heat- and water resistance when using high process temperatures (e. g. 70°C)

Typical Applications This is a universal system and is applicable for: furniture production, parquet flooring, window frames, window scantling, door manufacturing and solid wood bonding.

Suitable substrates Wood and wood based material.

Typical Properties

Property	Value
Base	PVA dispersion
Colour	white yellowish
pH	approx. 3.5
Viscosity (Brookfield HB, Sp2, 20rpm, at 20°C)	approx. 5 500 mPa.s
Shelf life	9 months



Application Instructions

The open time and setting time depend strongly on working conditions such as temperature, humidity, absorbency of the materials being worked, and amounts applied.

Good results will be achieved if the following conditions are observed:

- Room, material and adhesive temperature: 18 – 20°C
- Moisture content of wood: 8 – 10%
- Application quantity for assembly gluing: 150 – 180 g/m²
- Open time at 150 g/m²: 8 – 9 minutes
- Chalk point: approx. 8°C
- Press pressure for stress free workpieces: 0,1 – 0,5 N/mm²

Minimum pressing times:

- Assembly gluing: 8 – 15 minutes
- Short cycle press at +70°C: approx. 60 seconds
- Boards and block gluing: 15 – 30 minutes
- Window scantlings, depending on type of wood:
 - Softwood (e. g. spruce): from 15 minutes
 - Hardwood (e. g. oak, beech): approx. 2 hours

Laminating of wooden window profiles:

In accordance with the Quality Guidelines of i.f.t. Rosenheim, "Laminated Profiles for Wooden Windows", the wood moisture content must be 13 +/- 2%. The room temperature and the wood temperature must be at least +15°C.

Wood preparation:

All parts should mate well and be dust and grease free. Mismachined parts will lead to longer setting times and weaker bonds. The joints should be processed shortly before bonding.

Application of the adhesive:

Apply this adhesive thinly and evenly to one side or, if a high degree of water resistance is required, to both sides, using a spreading machine, glue roller, serrated trowel, glue brush and another suitable device.

Pressing:

Lay the items to be bonded together within the workable time and press them for as long a time as is needed to achieve the required initial firmness upon release.

The pressure should be high enough to ensure contact of the parts over the entire area of the joint. Depending on the material and the type of bond being used, the mechanical firmness required for further processing of the parts is achieved within the shortest possible space of time. The higher levels of water resistance form more slowly and should be tested not earlier than 7 days after bonding.



Wood discoloration:

Because of the varied nature of wood components, e.g., depending on the area of growth and the type of pre-treatment, unpredictable discoloration may in some cases appear on different types of wood, such as beech, cherry and others.

In addition, it is possible that iron together with the tannin in the wood can cause discoloration, especially in the case of oak.

We recommend you test this for yourself.

Equipment:

Properties of storage tanks, pipelines and spreading devices made from steel, galvanised steel aluminium or other non-ferrous metals cannot be recommended on account of the slightly acidic nature of the dispersion, as there is a danger of corrosion.

If this adhesive comes in contact with iron the adhesive will discolour blue.

For this reason, we recommend the use of storage tanks, pipes and spreading devices made from stainless steel or plastic (hard PVC, poly-ethylene, polyester resin).

Cleaning Instructions	Clean machines and utensils with water before the adhesive dries.
Typical Packaging	Please contact your local Sales Office for available packaging options.
Storage Conditions	In original sealed packaging protected from sun, dust, moisture and high temperatures. Please store at clean and dry conditions from +5°C to +20°C.
Disposal Advice	Please refer to the MSDS for disposal instructions.
Safety Advice	Please refer to the MSDS for safety advice.

Our Focus is Clear. Perfecting Adhesives.

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