

ECO 3

As a one-component product conforms with D 3, and with D 4 when mixed with hardener

Properties

RAKOLL®-ECO 3 is a PVAc adhesive with good water resistance which meets the requirements of class D 3 as a one-component product and mixed with RAKOLL®-GXL-3-Härter meets the requirements for D 4 standard DIN EN 204.

RAKOLL®-ECO 3 sets very quickly. If heat is applied, very short pressing times can be achieved. The bonded joints are characterised by a good high-temperature resistance.

Machining the joints causes very little wear on the tools.

Durability Class in accordance to DIN EN 204

single component: D 3
(Institute für Fenstertechnik e.V., Rosenheim)

mixed with RAKOLL®
GXL-3-Hardener D 4
(Institute für Fenstertechnik e.V., Rosenheim)

Applications

Examples of climatic conditions and areas of application

D 3: Interior with frequent short-term exposure to running or condensed water and/or heavy exposure to high humidity. Exterior not exposed to weather.

D4: Interior with frequent long-term exposure to

running or condensed water. Exterior exposed to weather but with adequate protection by a surface coating.

- Surface gluing of decor-finish film
- High-frequency bonding
- Stationary edgbanding with veneers, plastic laminates and solid wood strips
- Surface bonding of HPL/CPL in short cycle presses
- Carcase and assembly gluing
- Bonding joints in boards and block gluing of softwoods and chipboard as well as hardwoods

Instructions for use

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 and material temperature 18 ... 20 °C

Moisture content of wood 8 ... 10 %

Relative humidity 60 ... 70 %

Amounts of adhesive to apply

For surface bondings 80 ... 140 g/m²

For assembly gluings 160 ... 180 g/m²

Open time at 150 g/m² 8 ... 12 min

Press pressure, depending on type of bonding 0,1 ... 0,8 N/mm²

Minimum pressing times:

Surface gluing of decor-finish film in short cycle presses 5 ... 10 sec
High-frequency bonding with longitudinal heating from 15 sec

Surface gluing of HPL/CPL in short cycle presses at +70 °C from 45 sec
Assembly gluings 8 ... 15 min
Boards and block gluing 10 15 min

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.

Mixing ratio

100 parts by weight RAKOLL®-ECO 3 with
5 parts by weight RAKOLL®-GXL-3-Härter

Mix the adhesive and the hardener together thoroughly.

Pot life

Approx. 24 hours at normal temperature.
Temperatures above 20 °C reduce the pot life.

Wood preparation

All parts should mate well and be dust and grease free. Over tolerances will lead to longer setting times and weaker bonds.

The joints should be cut shortly before bonding.

Applying the adhesive

Apply RAKOLL®-ECO 3 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 or another suitable device.

Presses

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 wood can cause discoloration, especially in the case of oak.

We recommend you test this for yourself.

Cleaning

Clean machines and utensils with water before the adhesive dries.

Chemical-technical Data

RAKOLL® ECO 3

	RAKOLL® ECO 3	RAKOLL® GXL-3-Härter	Mixture
Basis:	PVA Dis-persion	Polyisocyanate	
Colour:	white	colour-less	white
Viscosity:	approx. 13.000 mPa.s	—	approx. 11.500 mPa.s
	Brookfield HB, Spindle 3, 20 rpm, +20 °C on the day of production		
White point:	approx. +7 °C	—	approx. +7 °C
pH value:	approx. 3	—	approx. 3

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

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

Technical stage of development: Dec. 2007

The data of former leaflets which differ from this version are no longer valid



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Labelling

RAKOLL®-ECO 3 is not subject to the marking regulations in accordance with the Dangerous Goods Act in its present version.

RAKOLL®-GXL-3-Härter is not subject to the marking regulations in accordance with the Dangerous Goods Act in its present version, but it does contain a small amount of isocyanate.

Safety advice

Please observe the information given on our EC-safety data sheets! (Please request).

Storage

Store RAKOLL®-ECO 3 away from frost in tightly closed original containers. Storage temperatures in excess of 25 °C considerably reduces the minimal storage time.

RAKOLL®-ECO 3 can thicken a little after pro-longed storage. The adhesive should then be thoroughly mixed and is then ready for use again.

Shelf life is at least 9 months.

OBSERVATIONS

All information, whether written or verbal regarding our products, their applications and uses, is given in good faith and based upon tests made by us, results of our research work and practical experience. Whilst we guarantee the constant quality of our products, we cannot be responsible for the results obtained in their use, since the conditions of

use and working methods are beyond our control.

We disclaim third part liability for the results obtained using our products, and recommend that tests should be made to determine the suitability of a particular product for a specific purpose before production is commenced. Otherwise the general terms of sale and delivery are valid.