



Rakollit™ 280 + Rakollit™ Härter WS 1 I

Type of Adhesive High performance two-component adhesive based on an aqueous synthetic resin dispersion with an Isocyanate compound as crosslinker.

- Product Benefits**
- adheres very well to wood and wood materials as well as on various plastics
 - because of the crosslinking process, this two-component adhesive forms joints of very high long-term stability which are water-resistant
 - Certifications
 - DN EN 204 – D 4
 - WATT 91
 - KOMO
 - ASTM D 5751 Wet Use
 - ANSI/HPVA 1994 Type I and Type II
 - JIS K 6806
 - JAS – Glued Laminated Timber Type I

Typical Applications Bonding joints in boards and block gluing of hardwoods, including oak, where particularly high tension can arise in the joint and high demands are placed on water resistance; gluing of windows and doors; surface gluing of veneers, gluing of plywood; doubling-up of sheet materials; to be used for exterior use if the glue line is not directly exposed the open weather; gluing on difficult wood species (e. g. Meranti, teak, mahogani).

Suitable substrates Wood and wood materials, as well as on various plastics.

Typical Properties

Property	Value		
	Rakollit™ 280	Rakollit™ Härter WS 1 I	Glue mix
Base	dispersion	isocyanate compound	-
Colour	white	dark brown	beige
pH	approx. 7,5	-	approx. 7,5
Viscosity Brookfield HB Spindle 3, 20 rpm; at 20°C	approx. 10 000 mPa.s	approx. 200 mPa.s	approx. 13 000 mPa.s
Shelf life	12 months		



Application Instructions

Rakollit™ 280 can be used only when mixed with Rakollit™ Härter WS 1 l.

The setting process is a physical process in the first phase, by which the dispersion water from the adhesive migrates into the material which is absorbent at least on one side.

For this reason, the open time and the clamping time required will depend on external influences such as the amount of adhesive applied, the absorbency of the workpieces and the climatic conditions.

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

- Room, material and adhesive temperature: 18 – 20°C
- Moisture content of wood: 8 – 14%
- Relative humidity: 50 – 70%
- Amount of adhesive to apply: 130 – 160 g/m²

If high joint tension is to be expected, we recommend double-sided application.

Closed Assembly time:

- one side (150 g/m²): 9 – 11 min
- both sides (150 g/m² each side): 14 – 17 min

- Pot life: approx. 1,5 h, at +20°C, proportion of hardener 14%.

After approx. 1,5 hours pot time, the mixed liquid glue begins to foam. As opposed to other systems, it is possible to continue to use the glue by stirring the mix to remove gas bubbles formed during the isocyanate reaction and then adding another 1,5 – 2% Rakollit™ Härter WS 1 l to the mix.

- Press pressure: 0,5 – 1,5 N/mm²

Minimum pressing times applied to one side:

- softwood: approx. 20 min
- hardwood: 40 – 45 min (depending on the wood)

applied to both sides:

- softwood: more than 30 min
- hardwood: at least 1 hour (depending on the wood)

Longer clamping times result in any case in higher joint strength and therefore better resistance when subjected to creep and moisture.

**Lamination of wooden window profiles:**

In accordance with the guidelines of the i.f.t., Rosenheim "Laminated profiles for wooden window", the moisture contents of the wood must lie in the range 13 +/- 2%.

Mixing ratio:

Thoroughly mix 100 parts by weight Rakollit™ 280 with 14 parts by weight Rakollit™ Härter WS 1 I until the mixture achieves a uniform beige colour. Mixing is best performed using motor-driven agitating vanes or cages.

Wood preparation:

All parts should mate well and be dust and grease free. The woods should be as near as possible identical to avoid tension developing in the joint later. In contrast to normal PVA glues, woods with a moisture content of up to 15% can be processed. This naturally results in longer setting times. In any case, the moisture content of the wood at the time of processing should correspond with that of the intended use to avoid cracks developing in the wood or in the proximity of the joint.

Glue spread:

Spread Rakollit™ 280 + Rakollit™ Härter WS 1 I using spreading machines, manual rollers or toothed trowels.

Pressing:

The items to be bonded must be placed together before the end of the closed assembly time and pressed for as long as is needed to achieve ad-equate strength.

The parts should then be put into temporary storage to allow the glue to set fully. Good mechanical strength is achieved in a relatively short time.

The reaction between Rakollit™ 280 and Rakollit™ Härter WS 1 I is of longer duration, tests for water resistance should therefore be carried out only after a storage period of 7 days after gluing.

Wood discolouration:

Rakollit™ 280 + Rakollit™ Härter WS 1 I causes no discolouration of the wood. The use of bleaching agents for surface treatment can bring discolouration of the joints.



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TECHNICAL DATA SHEET

Cleaning Instructions	Tools can be cleaned with water as long as the glue has not yet set.
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. Clean and dry conditions above 15°C and below 25°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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