



# KESTOKOL WR 11 + Hardener WR

**Two-component special adhesive for demanding conditions**

## PROPERTIES

**Kestokol WR 11 + Hardener WR** is an isocyanate emulsion polymer adhesive that withstands climatic stress excellently. The adhesive qualifies for JIS K 6806 water resistance norms. The product is suitable for the production of gluelam timber as defined in JAS 111 norm (Norsk Träteknisk Institutt (NTI) 2005).

## AREA OF USE

- \* **objects exposed to constantly changing weather conditions**
- \* **certain gluelam objects**

## MIXING INSTRUCTION

**Add 15 weight parts of Hardener WR into 100 weight parts of Kestokol WR 11 adhesive and stir well.** The pot-life of the mixture at +20°C temperature is max. 20 min. If the pot-life of the mixture is exceeded, the mixture starts to foam. When the temperature is higher, the pot-life is also shorter. New mixture can be added into an older mixture within the pot-life.

## TECHNICAL DATA

Adhesive type	dispersion
Colour	light beige
Adhesive joint water resistance	JIS K 6806
Consumption	160...200 g/m <sup>2</sup>
Open assembly time for 200 g/m <sup>2</sup>	7...12 min.
Pressure for unstressed work pieces	0,5...1,0 N/mm <sup>2</sup>
Pressing time,+20°C	minimum 20 min.

## RECOMMENDED WORKING CONDITIONS

Room, material and adhesive temperature	+18...+22°C
Wood moisture	7...15 %
Relative air humidity	60...70 %

The open assembly time and setting time strongly depend on the working conditions such as wood moisture and air humidity, temperature, absorbency and the adhesive amount applied. Our recommendations can therefore only be used as a guidance.

In order to determine the necessary pressing time and ensure the adhesive joint strength, adequate tests are to be carried out before use in full-scale production. A higher temperature shortens the necessary pressing time.

## INSTRUCTIONS FOR USE

Check that the joints fit well. Big joint tolerances reduce adhesive strength causing longer setting times. Apply the adhesive as a uniform coat on one side. Assemble and press the parts together. Pressing time depends on working conditions. For series production, tests should first be carried out to determine the exact setting times. For single part production the parts should repose for a while before further machining to reach the necessary bond strength. The final strength and water resistance of the joint is achieved within 7 days. In normal conditions the adhesive is non-staining. If the adhesive or the surfaces to be glued are contaminated with iron or rust, this contamination in combination with the tannic acid from the wood may cause wood discoloration.

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## **SAFETY AT WORK AND ENVIRONMENTAL SAFETY**

Avoid unnecessary skin contact. A separate material safety data sheet is available by request.

## **STORAGE**

Storage time in airtight original containers at room temperature at least 6 months. PROTECT FROM FREEZING. After a long storage stir before use.

## **NOTE**

When introducing new materials, production machinery or working methods a gluing test is to be carried out. Our recommendations are based on our own research and our best knowledge. We cannot, however, have any influence on whether the work is carried out correctly and for this reason we cannot be held responsible for the results.

**Hardener WR is polyisocyanate and great caution has to be exercised when using it.**

In problematical cases please contact our technical service.