

# MEKOL D4

## dispersion two component water resistant adhesive for gluing wood

**DESCRIPTION** MEKOL D4 is a synthetic adhesive based on special polyvinyl acetate dispersion and additives. If used in mixture with hardener MEKOL D4 component B will meet requirements according to stress group D4 under EN 204 - test certificate of IFT Institut Rosenheim. The adhesive is highly temperature resistant - test certificate of IFT Institut Rosenheim according to test method WATT 91: tensile strength at 80°C > 7,0 N/mm<sup>2</sup>.

**FIELDS OF APPLICATION** The adhesive is used first of all in cases where special properties of bondings are requested like:

- water resistance - where joint would be exposed to high relative air humidity, condense, short term water exposure or outdoor exposure (in this case joints must be protected by appropriate coating) - bonding of windows and doors, furniture for humid spaces, kitchen working surfaces, ...
- temperature resistance - WATT 91 > 7,0 N/mm<sup>2</sup>.

The adhesive is suitable for:

- cold gluing, gluing on heated presses and (only with B component) gluing on high frequency presses
- block gluing and surface gluing of all kinds of wood
- assembly gluing

**CHARACTERISTICS** Adhesive MEKOL D4 – component A:

Chemical base:	polyvinyl acetate dispersion
Color:	white, dry film is translucent
Speed of hardening	high, fast adhesive
Viscosity at 23°C (ISO 2555) (Brookfield RVT, sp. <b>5, 20</b> rpm)	11 000 - 14 000 mPas
pH value (ISO 976)	app. 5,5
Chalk point	app. 4°C
Open time at 20 °C and 65% RH, beech wood with 10% humidity:	
- spread quantity 100 g/m <sup>2</sup>	app. 3 minutes
- spread quantity 200 g/m <sup>2</sup>	app. 7 minutes

Hardener MEKOL D4 – component B:

Chemical base:	water solution of inorganic salt (Al Cl <sub>3</sub> )
Color:	transparent, yellowish

MIXTURE:

Mixing rate	adhesive : hardener (by weight) : 20 : 1
pH value:	app. 3,2
pot life	min. 3 days

The final water-resistance is achieved in seven days after gluing.

**DANGEROUS GOODS CLASSIFICATION** Mekol D4 – component A is not not classified as dangerous.  
Mekol D4 – component B is classified as dangerous ( see safety data sheet)

## APPLICATION

Before application the adhesive must be mixed with hardener in prescribed mixing ratio: 20 parts of A and 1 part of B component (by weight) to be resistant to water according to EN 204 - D4. We recommend gradual adding of B component during mixing.

Mixture must be stirred until homogenous (control by pH value measurement - not higher than 3,2) essential to achieve appropriate water resistance! This mixture is applicable at least three days.

The materials to be bonded must well prepared, dry, free from dust, oil and grease and be conditioned.

Adhesive can be applied with brush, spatula or glue roller, with gluing devices fitted to frame presses and dove tailing machines or with glue spreaders - equally on the whole surface.

Single-sided application of the adhesive is usually sufficient. When bonding wood types which are difficult to bond or applications where high quality of bond is required, two-sided application is recommended. In this way the open time is also prolonged.

### The most convenient working conditions are:

temperature of wood and all materials involved	18 - 20 °C
relative humidity	60 - 70 %
moisture content of wood	8 - 12 %
quantity applied	120 - 180 g/m <sup>2</sup>
pressure	min. 0,5 N/mm <sup>2</sup>

### Pressing time:

depends on temperature of gluing (surrounding, adhesive, wood), moisture content and type of wood, spread quantity and other gluing conditions. At optimal working conditions pressing times should be at least:

- joint bonding ( soft / hardwood)	at 20°C	min. 20 / 35 minutes
	at 50°C	min. 4 / 5 minutes (depends on thickness)
- high frequency bonding	softwood	min. 30 sec. (depends on thickness)
	hardwood	min. 2 minutes (heating app. half of pressing time)

Bonding at higher humidity content of wood, higher quantity of adhesive applied, lower temperatures of material and according to thickness the time of pressing must be prolonged.

Do not glue at temperatures below 15°C!

Additional working operations 12 hours after gluing.

## CLEANING

Machines, tools and packaging should be washed with (warm) water before glue dries.

## PACKING

MEKOL D4 component A

polyethylene vessels 5 kg net

MEKOL D4 component B

polyethylene bottles 250g net

## STORAGE

The adhesive should be stored in factory-sealed containers at temperature between +5°C and +25°C. It should be protected from frost. Properly stored adhesive is usable at least 12 months.

**CERTIFICATES**

IFT Rosenheim – Test according the requirements of the standard EN 204 D4 in EN 14275  
(Watt'91/80°C

The information provided herein, especially recommendations for the usage and application of our products, is based on our knowledge, results of laboratory tests and practical experience gained to date.

We guarantee a constant quality of our products under our technical specifications. Technical advice of our application department is available without obligation. This does not release the buyer from testing our products in his own responsibility with respect to their suitability for intended application and application process. Such an evaluation should be repeated if materials are changed in any way or bought from a different source.

We do not accept any liability with regard to above information or with regard to any verbal recommendation since different materials used in conjunction with our products as well as varying working conditions are beyond our control.