



## Wood & Specialty Adhesives

Telephone +43 2732 899 -1336

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www.dynea.com

# Technical Data Sheet

## W-Leim Plus 4000

W-Leim Plus 4000 is a self hardening powder resin blend based on an urea-formaldehyde (UF-) condensate and contains already hardener and filler/extender. This special resin contains copolymers which results in very good wetting behaviour e.g. when gluing problematic veneers like (birch, maple, pine). An additional addition of PVAc-glue is therefore not necessary.

W-Leim Plus 4000 shows in comparison to ordinary UF-powder resin systems advantages at low temperatures and equal pot life at decreased press times. Subsequent formaldehyde emission meets the requirements of gas analysis-test according to EN 717-2 (former DIN 52368).

### Fields of application

The most important application is coating of particleboards and MDF with veneers and films starting at a temperature at 40°C. W-Leim Plus 4000 is characterised by low content of free formaldehyde and low subsequent emission of formaldehyde. Coated boards made by W-Leim Plus 4000 meet requirements of the German Chemikalienverbotsverordnung (Regulation of prohibition of chemicals), former Gefahrstoff-Verordnung (Regulation of hazardous substances).

### Press temperatures

70 – 110°C (158 – 284 deg F).

### Control of bond quality

Peel test only in cold condition, final bond strength is achieved with after cure time.

### Standards

European ÖNORM EN 12765: B3

### Form of delivery

Paper bags with plastic inlet of 30 kg (approx. 66 lbs).

### Storage stability

In original bags W-Leim Plus 4000 has a storage life of approx. 8 months at 20°C (68 deg F), reduced to approx. 3-4 months at higher temperatures.

Storage always should be in a cool and dry place avoiding influence of high atmospheric humidity and high temperatures. Once a container has been opened, it should be used as soon as possible and always reclosed carefully to avoid absorption of humidity and following agglomeration.

## Formulation of glue mix

a) For manual application (roller, spatula):

5 kg (approx. 11 lbs) W-Leim Plus 4000 + 3 litres of cold water.

b) For mechanical application (gluing machine, roll coater):

5 kg (approx. 11 lbs) W-Leim Plus 4000 + 3 ½ litres of cold water.

It is recommended to mix in a first step the powder with about 2 litres of water to get a homogenous mass. With the remaining water the viscosity of the glue mix may be adjusted properly. No addition of fillers, extenders or hardeners.

## Pot life (working life) of glue mix

at 20°C (68 deg F)	approx. 10 hours
at 25°C (77 deg F)	approx. 5 hours
at 30°C (86 deg F)	approx. 3 hours

## Glue spread (single spread)

Coating particleboards and MDF:

- with veneers	100 – 150 g/m <sup>2</sup> (18 – 25 lb./1000 sq.ft.)
- with films	60 – 100 g/m <sup>2</sup> ( 8 – 16 lg./1000 sq.ft.)

## Allowable open assembly time

maximum 20 min., depending on room temperature and atmospheric humidity. Application of pressure has to be started while glue spread is still tacky.

## Pressure

Coating particleboards and MDF: 0.2 – 0.6 N/mm<sup>2</sup> (29 – 60 psi)

## Press time (setting time)

40°C	25 min.	80°C	4 min.
50°C	17 min.	90°C	2,5 min.
60°C	10 min.	100°C	1,5 min.
70°C	7 min.	110°C	1 min.

In these time the period for heating up veneers of approx. 0.7 mm is already taken into account.

### **Cleaning**

Tools and vessels are cleaned in easiest way with warm or hot water as long as the glue mix has not yet set.

### **Physiological effects**

Urea-formaldehyde-resins may emit small amounts of formaldehyde, which might cause dermatitis in sensitive persons, particularly on hands, forearms and mucous membranes. We therefore recommend efficient ventilation in working places and above presses and other machines. Prevent contact of formaldehyde-gas with eyes.

The usual regulations concerning industrial hygiene should be observed strictly.

223323-05-04

### *Common indications*

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