

Prefere 4452

One-shot powder urea adhesive for veneer splicing

Use

Prefere 4452 is a ready-to-use, one-shot adhesive for veneer splicing. The adhesive formulation includes a release agent. This reduces the adhesives tendency to stick to the heating shoes, thus the need for cleaning is reduced.

The adhesive is suitable for both longitudinal and cross feed edge joining machines. The adhesive's unique formulation ensures clean adhesive application and glue bonds of high quality.

The colour of the glue mix is brown. This gives yellowish to beige glue joints, which are virtually invisible for most veneers. For light coloured and white veneer qualities a white quality of the adhesive can be delivered.

Technical data for the adhesive

Appearance	Light beige powder
Density at 25°C/4°C	0,680±0,02 g/cm ³
Shelf life at 20°C	minimum 10 months

Delivery form

Prefere 4452 is delivered in 25 kg plastic lined paper bags.

Glue mix preparation

Prior to use, the powder adhesive is dissolved in water. The recommended water temperature is 15°C to 30°C.

Mixture	By weight	By volume
Prefere 4452	100 g	2 litres
Water	ca 60 g	ca 0,8 litre
Viscosity	4 - 5000 mPa·s at 20°C	

It is recommended to use a mechanical stirrer for dissolving the glue, although mixing by hand is also possible. The temperature of the water should be controlled since the mixing becomes difficult and time-consuming at too low temperature. On the other hand, at too high temperature the pot life of the glue mixture may be too short.

In high-speed mixers, it is recommended to first place the all the water in the mixing vessel. Mix until a homogeneous solution is obtained. In low speed mixers or when mixing by hand, place about ½ of the water in the mixer. Next add the powder and mix until a homogeneous solution is obtained. Finally add the rest of the water and continue to mix.

The mixture is inhomogeneous in the beginning. A homogenous mixture is obtained by mixing again after a few minutes.

Pot life

The pot life at different glue-mix temperatures are given in the table below.

Temperature (°C)	Pot life in hours
20	7 - 8
30	2½ - 3

The warmer the glue mix, the shorter the pot life. The glue mix will usually heat up in the glue spreader, thus cooling of the glue spreader is recommended to ensure long pot life. If large batches of glue mix is prepared, it is recommended to store the glue mix in a refrigerator until it is used.

Instructions for use

The drying time after application of Prefere 4452 on the veneers should be minimum 15 minutes. The maximum drying time depends on the moisture content of the veneer, the air humidity and the temperature. At 20°C the maximum drying time is 10 - 14 whereas it is 4 - 5 hours at 30°C. The optimum drying time is 2 - 3 hours.

For cross feed veneer splicing in short cycle presses the recommended temperature is 180 - 200°C with pressing times from 0,3 to 0,7 seconds. For continues presses line speeds from 10 – 30 m/ min can usually be used.

For longitudinal gluing Prefere 4452 can be used at press temperatures between 120 and 250°C. The line speed that can be used depends on the press temperature, the length of the heating zone and the thickness of the veneer. For thin veneers typical line speeds are 10 - 30 m/ min at 170 - 180°C. For thicker veneer qualities, the line speed must be lower and the temperature higher.

Cleaning

The mixing and spreading equipment must be cleaned before the glue cures. Cured glue is insoluble and must be scraped off.

Warm water (50-60°C) is recommended for cleaning. Before flushing of the equipment is started, the water pipes should be drained of cold water.

Advice on safe handling of glue remainders and wash water can be found in our Technical Information Leaflet No. 2E "Glue waste disposal -Prevention of pollution".

Safety precautions

Reference is made to the Safety Data Sheet for Prefere 4452.

When handling the adhesive, the hardener and the glue mix, it is recommended that certain precautions normally taken when handling chemicals is observed. Skin contact with the uncured glue should be avoided, since people with particularly sensitive skin may be affected. It is recommended to wear protective gloves, likewise eye protection where there is a risk of splashes. Hands and forearms should be thoroughly washed with soap and warm water at the end of the working day.

Adequate ventilation of the workshops should be maintained.

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