



# TECHNICAL DATASHEET

# DANAFIX

## One-component D4 PVAc glue

<b>Product:</b>	<b>Date of issue:</b> 16.08.2018 (Replaces: 28.03.2017)
<b>DANAFIX 446</b>	<b>Company:</b> DANA LIM A/S, www.danalim.dk Københavnsvej 220, DK-4600 Køge, Denmark
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<b>Product description and application:</b>	
DANAFIX 446 is a one-component water based PVAc dispersion adhesive for industrial wood production, it is ift. Rosenheim certified for water resistance durability class D4 according to EN 204/205 as well as for heat resistance according to WATT91.	
DANAFIX 446 is used without additional of hardener, always making it ready for use. The adhesive is suitable for almost all types of laminating and jointing, especially for finger jointing, where transparent joints and D4 water resistance are required. With a view to interior use, DANAFIX 446 is recommended for glue bonds which must tolerate fluctuations in temperature and humidity like the atmosphere in kitchen and bathroom.	
DANAFIX 446 can be used for products of exterior use, but only if the glue-lines are protected against exposure to the weather, for example by paint, etc.	
DANAFIX 446 can be also used to bond certain metals, such as aluminium and iron, to wood.	
<b>Application:</b>	
<b>Laminating:</b>	<b>DANAFIX 446</b>
Furniture:.....	●
Frame wood:.....	●
<b>Dowel-, tenon- and finger joints:</b>	
Furniture:.....	●
Frame wood:.....	●
<b>Types of wood:</b>	
Soft (ex. pine):.....	●
Hard (ex. beech, oak, teak):.....	●
MDF:.....	●
Chipboard:.....	●
<b>Press:</b>	
Cold:.....	●
Warm:.....	●
High frequency:.....	
<b>After treatment:</b>	
Cutting tools:.....	Very low
<b>Article Number:</b>	
1000 kg in container:.....	6037
20 kg in bucket:.....	6035

<b>Physical / chemical properties:</b>	
<b>Adhesive:</b>	
Type:.....	<b>DANAFIX 446</b> Water based PVAc-dispersion
Colour:.....	White
Solids content, approx.:.....	50%
Viscosity (Brookfield.RVF, spindle 4, 20 rpm, 20°C).....	5000 ±1000 mPa.s The viscosity could slowly increase during storage.
Specific gravity:.....	App. 1.1 kg/ltr
pH:.....	2.5-3.5
Shelf life:.....	6 months in unopened package at 20°C
<b>Glue joints:</b>	
Colour:.....	Transparent
Water resistance (EN 204/205):.....	D4
Temperature resistance (WATT 91):.....	>7 N/mm <sup>2</sup>

## Directions for use:

### Preparation:

Both surfaces must be clean, dry and well adjusted. Optimum results are obtained with newly worked wood.

### Application:

The adhesive is applied on one surface. When bonding hard woods, two-sided application is recommended, as well as increasing assembly time and pressing time.

**Moisture content of wood:** 6 - 12 % (joints for indoor application)  
11 - 15 % (joints for outdoor application)

**Amount of glue:** 100 - 250 g/m<sup>2</sup>, depending on application.

**Minimum film forming temperature:** 4 °C

**Assembly time:** 8 -9 minutes, pine wood, 20 °C, 50 % RH

If assembly time is "closed", it can be increased 1 - 2 minutes.

Assembly time is increased with two-sided application, hard wood, lower temperature and higher humidity of air and wood. Assembly time is reduced at higher temperatures and lower humidity of air and wood.

### Pressure:

Side pressure: 8 - 10 kg/cm<sup>2</sup> (soft wood) and 13 - 15 kg/cm<sup>2</sup> (hard wood).

Top pressure: 1 - 1.2 kg/cm<sup>2</sup>. Tensions in the wood might require higher pressure.

### Pressing time:

Pine wood, app. 9%  
moisture, RH: app. 50 %

	Lamella size 15 mm	Lamella size 43 mm
20 °C	6 min	12 min
40 °C	5 min	9 min
60 °C	3 min	7 min

Pressing time should be increased for hard woods, two-sided application, higher humidity of the air and higher moisture content of the wood. Pressing times can be reduced by f.ex. pre-heating of the wood. Full strength is usually obtained after 24 hours. Full water resistance is usually obtained after 7 days.

### Treatment:

Joints, which are exposed to the weather, should always be treated with an efficiently covering surface treatment.

### Cleaning:

Wet uncured adhesive can be removed with water. Cured adhesive can only be removed mechanically.

### Storage:

Store in a cool place (5°C - 35 °C) and in a tightly closed package. Protect from freezing.

**All stated times are meant as a guideline. Sufficient tests should be carried out to establish final working conditions.**

## Safety:

Hazard symbols: None

Risk and safety phrases: None

For further information regarding to safety, refer to Safety Datasheet.

## Further information:

### DANA LIM offers a range of adhesives for professionals:

100-series: Upholstering adhesives

200-series: Flooring adhesives

300-series: Wall adhesives

#### 400-series: Wood adhesives

500-series: Sealants & PU-foams

600-series: Building-additives, fillers etc.

700-series: Paper-, packaging- and newspaper adhesives

800-series: Hot melt

900-series: Cleaning-, release agents and hardeners.

### In the 400-series Wood adhesives DANA LIM offers:

400-series: Special adhesives

410-series: Adhesives for edge-bonding (Cold-Activating)

430-series: Moisture resistant D3-adhesives

#### 440-series: Moisture resistant D4-adhesives

450-series: Urea-formaldehyde adhesives

460-series: Adhesives for dowel-, tenon and finger joints

470-series: Adhesives for foiling of PVC, metals etc.

480-series: Adhesives for lacquered wood

490-series: Adhesives for production of laminated wood for furniture.

The information and data contained in this data sheet are based on extensive laboratory testing and our practical experiences, and are meant for helping the user to find optimum working methods. As the conditions at the user are beyond our control, we make no warranties concerning the results, achieved by the products. The information's in this technical data sheet are typical values, intended as a guideline. They should not be regarded as product specifications. Please also refer to our standard sales conditions and terms of delivery.