# Wood adhesives

# WR 13.50 M

#### **CHARACTERISTICS**

One-component adhesive based on modified poly (vinyl acetate) dispersion of D3 water resistance class according to the Standard PN-EN 204. Joint after attaining full strength demonstrates good adhesion to wooden surfaces subjected to static and dynamic loads and demonstrates a good initial grab.

The adhesive is certified by Institut für Fenstertechnik in Rosenheim, Germany, and also by Wood Technology Institute in Poznań, Poland, to confirm D3 class according to the Standard PN-EN 204.

#### **APPLICATION**

- bonding of solid wood during manufacturing of interior woodworks
- bonding of soft wood
- bonding of tough wood
- bonding of wood during window woodworks
- bonding of floor panels
- bonding of chipboard or fibreboard
- bonding of plywood
- bonding of other wood-based materials
- intended for use on cold presses and for hand working
- intended for use on hot presses for bonding of veneer or laminates
- with chipboard or MDF blindfloor

# INDICATIONS REGARDING USE OF THE ADHESIVE

# **Material preparation**

Surface intended for bonding have to be dry, cleaned and free from dust, removed should be also traces of oil and fats which can reduce the adhesion. Wood moisture content should be in the range  $8 \div 12$  [%]. Pieces intended for bonding should have matching shapes.

# **Adhesive application**

It is recommended to stir the adhesive before use. It can be applied by means of spreading in a one or double side manner with the use of a brush, putty knife, feeding vessel,

# **SPECIFICATION**

Dry substance  $50 \pm 2$  [%] content

Brookfield viscosity  $13\,000 \pm 2\,000$  [mPas]

# **PARAMETERS**

| рН                     | $3.5 \pm 0.5$                                  |
|------------------------|--|
| MTTF                   | +6 ± 1[°C]                                     |
| Strength after 25 min. | 3 or above [MPa]                               |
| Joint                  | Colorless, tool non-glazing, ageing resistant. |
| Density                | 1,05 g / cm³                                   |
|                        |  |

applicator, hand roller or machine (using nozzle or rollers). The recommended amount of spread adhesive depends on the type of base and may vary in the range  $90 \div 180$  [g/m<sup>2</sup>].

### **Wood discoloration**

The adhesive does not cause wood discoloration; however, it is recommended to avoid spreading with the use of iron-containing tools on tannin-containing wood as discoloration may appear.

# Open time

Open time:  $3 \div 10$  [min]. Depends on wood sort, its porosity, ambient temperature, air humidity and amount of the adhesive that has been spread. Bonding is possible as long as the adhesive is moist (white).

# **Bonding temperature**

Use at temperatures exceeding + 7 [°C]. Refers to ambient temperature, and first of all, to bonded materials and adhesive temperatures.



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# **Pressing**

# - pressing pressure

In the range  $0.1 \div 1.2$  [N/mm²] depending on stress in bonded materials. In case of hand spreading, tighten the bonded areas until the leakage of adhesive excess will occur.

# - pressing time

Depends on wood sort and its moisture, ambient temperature and air humidity, amount of adhesive spread and stress in bonded materials.

Bonded parts should remain under pressing until the joint has attained strength allowing for further processing or transportation.

# - proposed average pressing times

- cold presses 15 ÷ 30 [min]
- hot presses 2 ÷ 10 [min] (depending on press temperature)

# Good effects can be obtained in the following conditions:

| Bonding temperature       | 15 ÷ 25 [°C]          |
|---------------------------|-----------------------|
| Relative air humidity     | 40 ÷ 70 [%]           |
| Wood humidity             | 8 ÷ 12 [%]            |
| Amount of adhesive spread | $90 \div 180 [g/m^2]$ |
| Open time                 | 3 ÷ 10 [min]          |
|                           |                       |

#### **CLEANING**

Tools should be washed in water right after operation. Do not allow drying out. Dried out adhesive should be removed mechanically after soaking in hot water for 1 hour.

#### **PACKAGING AND TRANSPORTATION**

Product is offered for sale in 20 kg, 60 kg and 1000 kg plastic containers. Packaging and transportation are not subject to RID/ADR regulations. It is possible to use other packaging after prior agreement between producer and customer. The packaging cannot deteriorate the quality of the product.

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# **STORAGE**

Store in original tightly closed containers at temperature range from +5 to +30 [°C]. Product stored in such conditions does not change its properties in the period of 12 months from the date of production.

**Disclaimer** – Information provided herein is result of investigations which were carried out by Application Laboratory of SYNTHOS S.A. according to valid standards and the present state of knowledge. The manufacturer of the adhesive may have not predicted all of its applications. Carrying out of application and bonding tests by the user and validation of the final product properties are highly recommended as the way the adhesive is used is entirely beyond the control of the adhesive manufacturer. User of the adhesive is responsible for the proper choosing and application of the product. Manufacturer holds no responsibility with respect to existing damages to the surface or its deteriorated condition, which may be effect of ambient conditions, initial preparations or structural defects. After a long storage of the adhesive a layer of water may appear on its surface, it is a natural phenomenon which disappears after the adhesive has been stirred.

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