



ALCOLIN COLD GLUE

Description

ALCOLIN COLD GLUE has been the market leader in wood adhesives for over 50 years. It is the original multipurpose polyvinyl acetate based adhesive exhibiting excellent bond strength to a wide variety of wood species. It has a medium viscosity making it easy to apply, and dries to form a tough glue-line that meets the SANS 10183:2009 D2 standard



Features & Benefits

- High strength - final bond stronger than wood
- Long open time - long assembly time
- Versatile - bonds to a variety of porous substrates
- Low VOC - non-toxic, non-flammable (wet state)
- Water-based formulation - cleans up easily with water

Applications

- Ideal for interior furniture assembly, model building, craftwork and photo mounting
- Suitable for edge gluing, face gluing, laminating and veneering applications

Adhesion

Excellent adhesion to soft woods (Pine, Meranti) and medium woods (Beech, Oak) and processed boards composites (hardboard, chipboard, supawood, high pressure laminates), leather, cloth, felt, paper, cardboard, cork and most other porous materials

Performance properties – industry standards

Meets the requirements of SANS 10183:2009 D2 standard

Limitations

Alcolin COLD GLUE is not intended for exterior use or where moisture is likely. For exterior applications uses ALCOLIN ULTRA WOOD GLUE OR ALCOLIN WATERPROOF GLUE. If ALCOLIN COLD GLUE is to be used outdoors, or if it will be exposed to the elements, the joints should be covered with paint or varnish once the adhesive has dried. Should not be used to adhere coated woods, synthetic woods and melamine. Not suitable for structural or load bearing applications, or where gap filling properties are required. Do not use when temperature, glue or materials are below 4°C. Because of variances in the surfaces of treated lumber, it is a good idea to test for adhesion

Safety instructions

Although Alcolin COLD GLUE is non-toxic, safe handling practices should be implemented to avoid irritating sensitive skin. It is advisable to wear gloves in order to avoid direct skin contact. If glue comes in contact with skin or eyes, flush thoroughly and immediately with water. If irritation continues, seek medical attention. Glue is slippery when wet, so care should be taken when cleaning spillages that occur. Refer to our Material Safety Data Sheets for further toxicological information and comprehensive handling instructions



Surface preparation

The surface must be clean, dry, free from all loose materials, dust, dirt, rust and any other contaminants. When working with woods that are oily or high in tannic acid, wipe the joints with acetone before gluing. Acetone clears the contaminants from the wood pores on the bonding surface and dries quickly without leaving any residue

For the best result, planing of the wood should take place within 24 hours of gluing. After this time, the cell structure of the wood closes, which may significantly reduce the ability of the glue to penetrate sufficiently, resulting in a poor bond

The moisture content of the wood should be between 8 – 12%. Higher moisture contents will result in longer pressing times and will lead to risk of delamination and wood splitting due to shrinkage of the wood on either side of the bond-line

To avoid wood shrinkage or swelling after processing, it is very important to ensure that the wood is dried to a moisture content corresponding to the equilibrium moisture content (EMC) at the site where the article will be used. EMC is the moisture content of the wood that corresponds to a given relative humidity. If the moisture content of the wood is higher than EMC, it will lose moisture until it reaches EMC. A corresponding shrinkage in the wood will occur which may result in delamination along the glue line and/or wood splitting. *Consult with your Alcolin Rep for further information*

To prevent “stepped joints”, it is important to ensure that all the wood has similar moisture content. This can be achieved by allowing the wood to acclimatize in your shop for 7 – 14 days

Care should be taken to ensure a tight fit between wood pieces with no saw marks and no burnishing of the surfaces to be glued

Poor surface preparation may result in the delamination of the glued joint

Directions for use

- Ensure that surfaces are prepared as above and ensure that all joints fit tightly
- For a successful gluing operation, consideration must be given to each of the following points discussed in detail below : Glue Spread Rate, Assembly Time, Press Time, Temperature and Pressure, and Post Press Conditioning
- Apply glue with a roller, wheel, toothed trowel or brush. Apply a **Spread Rate** of approximately 200g/m² (glue “squeeze out” should be seen coming from the joint). The glue spread rate is dependent on the object of gluing and the wood species, and must be determined in each specific case. When gluing hard and oily wood species, the substrates should be newly planed and the adhesive should be spread on both surfaces. Veneering applications will require a lower spread rate of approximately 100g/m²
- The **assembly time** refers to the time lapse between glue spreading and application of pressure and is generally accepted to be approximately 20 minutes. The time between glue spreading and closing the assembly is **open assembly time**, which in the case of ALCOLIN COLD GLUE is approximately 10 minutes at 20°C and 65% relative humidity. The time between closing the assembly and pressure application is called the **closed assembly time**, which is approximately 10 minutes. It is recommended that only the amount of adhesive that can be used within this period be applied at any one time. The assembly time is influenced by the glue spread rate, environmental conditions, and wood species. Assembly time is increased by cold weather, high humidity; high spread rate and high-density wood species (slow absorption of the adhesive into the wood)
- **Press time** is dependent on wood species, moisture content and environmental conditions. Cold temperatures and higher humidity levels may require longer press times. Denser wood species, oily woods and those with higher moisture content will also require longer press times. We recommend pressing an unstressed joint for 60 minutes to four hours



TECHNICAL DATA SHEET

- Appropriate **Press Pressure** is essential for a successful bond. Sufficient pressure is required to bring the joint tightly together. Too high pressure and short assembly times may cause the glue to be squeezed out of the glue line, resulting in glue starvation and delamination. Too little pressure will not bring the surfaces together closely enough to form a strong bond along the glue line. 7 - 10 bar or kg/cm² (100-150 psi) is recommended for soft woods, and 9 -12 bar or kg/cm² (125-175 psi) for medium woods. Clamps should be positioned a minimum of 4cm away from the sides, and evenly spaced at 20-30cm throughout the piece
- Temperature in the glue line can be between 4 - 90°C. Use of the adhesive below 4°C will result in 'chalking' and subsequent delamination. Higher temperatures up to 110°C can be used if the press times are kept very short. For **Press Temperatures** above 50°C, it is recommended that the shortest possible press time be determined
- Glue joint "squeeze out" may make the area around the joint difficult to stain. Although sanding the area will help, we recommend using masking tape to cover the areas that you do not want exposed to glue. Remove excess glue immediately by wiping with a clean damp cloth
- ALCOLIN COLD GLUE does not discolour wood, however, iron which might come from the glue spreader, rusted cutter blades, or from tannic acids in some wood species, e.g. oak, may contaminate the glue and darken the glue line. For this reason, always use clean, sharp, and unruined cutter blades for cutting the wood and avoid using metal tools with the adhesive
- **Post Press Conditioning** : after a minimum clamping period, the panel will develop enough handling strength to permit it to be removed from the press. An overnight cure is recommended prior to machining. A storage period of 3-4 days may be required to eliminate sunken joints caused by residual moisture in the glue line

Cleaning

- Tools can be cleaned with water

Storage stability

ALCOLIN COLD GLUE has a shelf life of at least 12 months if stored in a cool (below 25°C), dry place in its original moisture-tight container. The glue should not be stored below 0°C or above 30°C. If the material is kept beyond the recommended shelf life, it is not necessarily unusable. A check should be performed to observe whether the product has not separated, thickened, or shows signs of bacterial degradation (bad smell, discoloration and low viscosity). To maximize the shelf life of the opened container, ensure that the packaging is closed to create an airtight environment when not in use. If the packaging is left open for long periods, the glue will thicken and form a skin on the surface, which can damage pumps and block filters

Product packaging

- 125ml bottle
- 250ml bottle
- 500ml bottle
- 1L bottle
- 2.5L bucket
- 5L bucket



TECHNICAL DATA SHEET

Product data

i. Physical data

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|------------|---|
| Type | Polyvinyl acetate adhesive |
| Appearance | Viscous white liquid, drying to a translucent white glue line |
| Density | Approximately 1.06g/cm ³ |
| MFFT | Approximately 4°C |
| PH | Approximately 6.3 |
| Solids | Approximately 38% |
| Viscosity | Approximately 13000cps (#5, 20rpm, 23°C) |

ii. Application data*

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|--|---|
| Minimum Application Temperature | 4°C |
| Spread Rate | Approximately 200 – 250g/m ² for assembly Approximately 150 - 200g/m ² for laminating Approximately 100 - 150g/m ² for veneering |
| Assembly Time (20°C at 65% RH; 150g/m ²) | 10 minutes (Open) 10 minutes (Closed) |
| Press Time (20°C at 65% RH; 150g/m ²) | Unstressed Joints : 60 minutes to 4 hours |
| Press Temperature | Room Temperature to 110°C |
| Press Pressure | Soft Woods : 7 – 10 Bar Medium Woods : 9 – 12 Bar |

*Please refer to "Instructions for Use" section for further details

iii. Performance data

| | |
|---------------------------------|---|
| Glue line | Meets SANS 10183:2009 D2 standard |
| Tensile strength (wood failure) | 7.3N/mm ² (65%) – beech wood, 2hrs clamping; 24hrs condition |
| Service temperature range | -5°C to + 60°C |

The above information is only offered, as a guide to the use of this product. Furthermore, users should satisfy themselves that it is suitable for their needs. Since we have no control over the conditions under which it is used, we cannot accept responsibility for problems caused by the use and/or application of this product.

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