

Titebond® ORIGINAL**PRODUCT DESCRIPTION**

Original is an extremely fast-setting, high-quality aliphatic resin emulsion adhesive. It dries very rapidly to give a short clamp time and has high solvent-resistance. Original is excellent for general assembly as well as edge and face gluing of hardwoods and softwoods.

PHYSICAL PROPERTIES¹

Chemical Family Description: Aliphatic resin emulsion adhesive

Appearance: Cream coloured liquid

Freeze/Thaw Stable²: No

Specific Gravity: 1.11

Weight Solids (%): 45-47

Typical Viscosity (cps): 3,000 – 3,500

pH: 4.0-4.5

Suggested Minimum Use Temperature³: 10°C

APPLICATION GUIDELINES

Moisture Content: Six to eight percent is the recommended moisture content for the gluing stock. High moisture content will dramatically increase the clamp time needed. Additionally, panel shrinkage may occur resulting in stress cracks or end joint delamination.

Stock Preparation: The preparation of the stock to be glued is extremely important. Joints cut from rip saws should be free of saw marks. They should also be straight and square. Moulded or jointed stock should be free of knife marks. Glazed or burnished joints will prevent adhesive penetration and should be guarded against. When possible, glue joints should be prepared and glued the same day.

Spread: Generally, 140-245 g/m² of glue line is adequate. Conveyorized spreaders are commonly used in edge-gluing applications. The use of a wool felt sleeve on the spreader roll can aid in obtaining a desirable spread and reducing excess glue usage.

Assembly Time: Assembly time can vary greatly depending on the quantity of adhesive used, glue spread, porosity and moisture content of the gluing stock, environmental conditions, etc. Generally accepted assembly times range from 2-10 minutes.

Pressure: Pressure is dependent upon the species or material to be glued and joint preparation. Direct contact of the gluing surfaces must be made to obtain maximum strength. Suggested pressures for various wood densities are: low 7.0-10.5 Kg/cm²; medium 8.8-12.3 Kg/cm²; high 12.3-17.6 Kg/cm². Clamps for edge gluing should be spaced 20-40 cm apart and 5 cm from the end of the panel to evenly distribute pressure along the entire length of the glue line.

Clamp Time: Clamp time is dependent on the species and moisture content of the stock, environmental factors and glue line thickness. Clamp times can range from a few minutes in some assembly gluing to more than an hour depending on the above factors. Clamp times should be determined under plant conditions.

Additional Conditioning. An overnight conditioning period is recommended prior to machining. A conditioning period of 3-4 days may be required to eliminate "sunken glue joints" caused by residual moisture in the glue line.

APPLICATION GUIDELINES (continued)

Clean Up: To easily remove Franklin adhesive from your equipment while it is still wet, use water. Warm water will soften dried glue, however steam will soften it more rapidly. Cleaning clamps, jigs, press platens and fixtures is much easier if equipment is regularly coated with a glue release agent, wax or soap before using it. These release agents prevent the adhesive from sticking to the equipment and will help dried glue to flake or chip off quickly and easily.

PERFORMANCE PROPERTIES

Block Shear Strength⁴:

	lbin ²	wood failure%
25°C	3,600	74
65°C Overnight	3,533	74

Room Temperature Speed of Set⁵: 1.37 (Very Fast)

¹ All numerical values represent typical properties.

² If product has been frozen, contact Technical Service for instructions.

³ Measured by Franklin's film formation test. Gluing conditions will affect minimum use temperature.

⁴ Performed according to ASTM D-905 on hard maple.

⁵ Measured by Franklin's torsion speed of set tester on hard maple.

RELATED PRODUCTS

Titebond 50 may be removed from pressure in 45-60 minutes in most operations. Titebond Regular is a slower setting version of Titebond 50. Titebond Slow Set allows long assembly times for operations such as laminating stair hand rails. Assembly High Tack is our fastest setting edge glue. Multibond EZ-1 forms an EN 204 group D3 bond. Multibond X-016 and Advantage 2 form EN 204 group D4 bonds and are formulated for exterior millwork.

HANDLING AND STORAGE

Shelf Life: 12 months at 20°C Store in closed containers.

To ensure uniformity of adhesive, stir before using.



www.weldline.com.au

sales@weldline.com.au

Telephone Number: (08) 8280 6440 Facsimile Number: (08) 8280 9110

Lot 11 Angle Vale Crescent, Waterloo Corner. S.A. 5110

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