



Advantage[®] 405

PRODUCT DESCRIPTION

Advantage[®] 405 is a highly water-resistant, 2-part crosslinking polyvinyl acetate emulsion adhesive with a low minimum use temperature. This very high performing adhesive conforms to section 6.2.1 of the North American Fenestration Standard 101/I.S. 2 NAFS-02. It has surpassed both the ASTM D-5572 wet use finger joint and ASTM D-5751 wet use edge glue standard. This versatile adhesive can be used for finger jointing, edge gluing, hot pressing, and radio frequency gluing.

PHYSICAL PROPERTIES

Chemical Family Description: Crosslinking polyvinyl acetate emulsion adhesive

Appearance: Beige colored liquid

Freeze/Thaw Stable: Yes
pH: 6.5-7.6

Typical Viscosity (cps):

Uncatalyzed: 1,800-3,800 ^{4/60/83 °F}

Catalyzed 1,500

Suggested Minimum Use Temperature:

Catalyzed: 55 °F

Per Gallon (Weight lbs.): 9.25

Weight Solids (%): 50-54%

MIXING INSTRUCTIONS

The normal recommended portion of catalyst to resin is 5% by volume (one quart to five gallons). A reduced proportion can be used under certain conditions such as burning in a radio frequency press. Mixes containing less than 2½% by volume should be avoided.

Place the resin in mixer and slowly add catalyst while stirring. Continue mixing for five minutes after all the catalyst has been added to ensure a uniform mixture.

APPLICATION GUIDELINES

Moisture Content: Six to eight percent is the recommended moisture content of the gluing stock. High moisture content will slow down glue line cure and cause weaker than normal adhesive bonds. Additionally, panel shrinkage may occur resulting in stress cracks or end 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 glue penetration and should be guarded against. When possible, glue joints should be prepared and glued the same day. The stock should be machined on both top and bottom surfaces to allow even contact with radio frequency platens.

Spread: Generally, 35-50 pounds per 1,000 square feet of glue line (6-9 wet mils or 180-260 ft²/gal) is adequate. Conveyorized spreaders are commonly used in this application. The use of a wool felt sleeve on the spreader roll can aid in obtaining a desirable spread and reducing excess glue usage.

Pressure: Pressure is dependent upon the species or material to be glued. Direct contact of the gluing surfaces must be achieved to obtain maximum strength. Suggested pressures for various substrates are; high pressure laminates 30-80 psi; solid core stock 100-150 psi; all veneer constructions 100-250 psi.



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APPLICATION GUIDELINES (Continued)

Finger Joints: Sufficient adhesive spread will provide a uniform coverage that should cover 1/2-2/3 the length of the finger on both sides in a thin continuous film. Make sure fingers aren't skipped and that the adhesive is applied to the whole joint, not just the tips of the fingers. This adhesive is not fire rated so if used for vertical stud manufacture, a non-HRA (non-heat rated adhesive) stamp is necessary.

RF Cure Time: Radio frequency cure times will vary from machine to machine. Machine manufacturers suggest that machines will cure between 75 and 100 square inches of glue line per minute per kilowatt. Glue joints should feel warm immediately after the cure cycle. Cure times should be determined through plant trials.

Press Time: Press time is dependent on the adhesive used, gluing stock type, moisture content of the stock and environmental conditions. Typical press times range from 30 minutes to two hours. Press times should be determined under plant conditions.

PERFORMANCE PROPERTIES

Room Temperature Speed of Set: 0.60 with Catalyst A (Very Slow)

Has met or exceeded:

ASTM – D 5751-99 Wet Use Edge Glue / Laminate Joint, Ponderosa Pine

ASTM – D 5572-99 Wet Use Finger Joint / non structural lumber

TECO Reports available upon request: 03-026 ASTM D 5572-99 and 03-037A ASTM D 5751-99

STORAGE AND HANDLING

Shelf Life: 3 months at 70 °F. Store in closed containers.

Product not available in California.

Note:

Discoloration of wood veneer products occurs occasionally. This phenomenon is very infrequent and ranges in appearance, color and may vary with the species of the veneer. Discoloration may appear during or after the manufacturing process. Among other things, environmental conditions in some manufacturing plants can contribute to discoloration. If veneer discoloration occurs, our representatives are prepared to visit and assist you in attempting to identify the causes of the staining and possible solutions. Because such discoloration is attributable to conditions beyond our control, Franklin International can assume no responsibility of liability for any discolorations that might occur.

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