



Advantage 160

PRODUCT DESCRIPTION

Advantage 160 is a highly water-resistant, 2-part crosslinking polyvinyl acetate emulsion adhesive. It is recommended for applications requiring ASTM D5572 performance. Advantage 160 has a good catalyzed pot life and is ideal for finger jointing, edge gluing, radio frequency applications and hot pressing.

PHYSICAL PROPERTIES

Chemical Family Description: Crosslinking polyvinyl acetate emulsion adhesive

Appearance: White colored liquid

Freeze/Thaw Stable: Yes

pH: 4.5 - 5.0

Typical Viscosity (cps):

Uncatalyzed: 1700 - 5300 ^{3/12/83°F}

Catalyzed: 1,500 - 3,000

Suggested Minimum Use Temperature:

Uncatalyzed: 41° F (5°C)

Catalyzed: 45° F (7°C)

Weight Per Gallon (lbs): 9.10

Weight Solids (%): 49.0 - 53.0

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)

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.

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.

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. End pressure should be set to provide 150-200 psi pressure for non-structural joints and 350-400 psi for structural joints.

PERFORMANCE PROPERTIES

Has met or exceeded the following industry standards:

- NWWDA 1.S. 1-87 Type I and Type II with Catalyst A
- ANSI/HPMA 1994 Type I and Type II water resistance with Catalyst A
- D-5572 Wet Use (Finger Joint)
- European Standard DIN EN 204 D4 (formerly DIN 68602 B4)
- European E-1 formaldehyde emission standard

Block Shear Strength:

	psi	Wood failure%
Room Temperature	3,720	34
150 °F Overnight	1,720	05

Room Temperature Speed of Set: 0.74 with Catalyst A. (Very Slow)

STORAGE AND HANDLING

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

IMPORTANT NOTICE TO CUSTOMER:

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