Gluing Checklist for Operator

Before the gluing job

Adhesive

✓ Select adhesive based on species, type of components and service conditions
✓ Check expiration date (don’t use if expired)
✓ Rotate stock and use oldest material first
✓ Stir adhesive thoroughly before using

Wood

✓ Wood should be KNIFE-PLANED WITHIN 24 H OF ADHESIVE SPREADING (validate with supervisor)
✓ Wood surface inspection
   ➢ Surface should be smooth, flat, and free of machine marks and surface irregularities (e.g. planer skips and crushed, torn, or chipped grain)
   ➢ Surface should be free of burnishes, exudates, oils, dirt, and debris
✓ Measure wood moisture content (MC) of each component with a calibrated moisture meter
   ➢ Wood moisture content should be within 10 to 12%
   ➢ Don’t use wood that is green or high in moisture content (above 14% MC)
   ➢ Wood moisture content should be slightly below that desired for the finished product

During the gluing job

Occupational health and safety

✓ Gloves and safety goggles are usually recommended
✓ If ventilation is not sufficient to effectively prevent build-up of vapour/mist/fume/dust, appropriate respiratory protection must be worn.

✓ Safety Goggles  ✓ Working Gloves
✓ Mask (when using glues that contain VOC)  ✓ Mask
Components to be glued

- Avoid gluing wood components where the grains are not parallel unless necessary
- Avoid large differences in MC between adjacent components (OPTIMUM: 2% OR LESS)

Delamination caused by large difference in moisture content between adjacent components

- When many pieces are to be glued together, have them ready in the order of assembly
- Make sure wood surfaces are parallel and flat
- Alternate wood arrangement when panelling
Gluing Checklist for Operator

Adhesive operating conditions

✓ Follow gluing specifications as prescribed by the manufacturer of the adhesive
  ➢ Consider pot life
  ➢ Consider adhesive mixing directions (if applicable)
  ➢ Consider conditions for applications of the adhesive (rate of spread or thickness of film, applied to one or both surfaces, etc.)
  ➢ Consider assembly conditions (room temperature, length of time)
  ➢ Curing conditions (amount of pressure, length of time)

✓ Spread the glue and close the joint as soon as possible
  ➢ Spread evenly the adhesive onto the surface
  ➢ Avoid thick gluelines - Slide surfaces together back and forth to evenly thin the glueline down to a minimum
  ➢ Proper spread is important - Too little results in starved joint and a poor bond & too much results in wasteful and messy squeeze-out

Pressing

✓ Adjust pressing pressure to the density of the wood (specific gravity of 0.3 to 0.7 = 0.70 to 1.70 MPa = 100 to 250 psi; higher density up to 2.0 MPa or 300 psi)
✓ Record start and end pressing time on the board
✓ Ensure that small amount of glue is squeezed out on every glue line. Moderate squeeze-out of glue in the centre glueline indicates proper spread of glue
After releasing pressure

- Scrape squeezed glue from the board
- Handled glued boards with care as glue is not completely cured at this stage (trimming and rough sanding can be done after overnight pre-aging in ambient conditions)
- Don’t expose the board to direct sunlight. Avoid too much air circulation and heat.

After the gluing job

- Clean up rollers
- Don’t return unused adhesive to original container
- Dispose of adhesive and packaging that cannot be cleaned in accordance with local and national regulations (don’t empty into drains, surface water, ground water)

Handling and storage

- Keep adhesive containers closed when not in use
- Keep containers in cool and dry place away from heat and direct sunlight