



Woodwork Career Alliance Correlation Chart



The content of the text and Lab Workbook correlates to Woodwork Career Alliance (WCA) skill standards. The WCA establishes a benchmark to measure and recognize an individual's skills and knowledge. The WCA skill standards help ensure that students are prepared for rigorous industry standards, and provide a pathway for advancement for professional woodworkers.

The WCA skill standards define the minimum requirements for specific woodworking machine operations. Using the WCA skill standards in a wood training program can help you, your students, and your program obtain industry recognition. The *Modern Cabinetmaking* textbook and Lab Workbook are correlated to the performance standards, helping prepare your students for certification.

12. Finishing

Finishing Considerations

- Pre-Operation Checklist is a prerequisite for ANY operation.
- These standards are written as generic to spraying technique with a handheld spray gun. Specific variances may exist for conventional, HVLP, gravity, and air-assisted airless equipment.
- Spray gun, spraying environment, and related accessories are optimal.
- Spray material is properly thinned with consideration for temperature and humidity. (Refer to viscosity cup standards.)
- Safe practices are followed for handling finishes in accordance with Material Safety Data Sheets (MSDS).
- Required OSHA-approved personal protective equipment is worn.
- Required OSHA-engineering controls (example, spray booth) are in place and operating.
- Lock-out/tag-out procedure is in place and followed.
- Process is completed in a timely manner.

Spray Guns

Pre-Operation Checklist				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1		Verifies proper viscosity and temperature of coating.	Chapter 51	
		Verifies atomization and pattern balance with flood test on vertical paper panel.	Chapter 51	
		Verifies that trigger is functional and nozzle tip and ports are clean.	Chapter 51	
		Verifies operator has free movement through the spraying motions required and that hoses and pots are unobstructed.	Chapter 51	
2		Interprets Product Data Sheet and adjusts fluid viscosity as required.	Chapter 51	
		Selects and installs appropriate air cap and fluid needle and nozzle.	Chapter 51	
		Adjusts air and fluid knobs to achieve optimal spray rate and fan pattern.	Chapter 51	
		Meets Level 1 performance standard.		

Operation—Spray Clear and Opaque Coatings				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1	Given a properly prepared product and properly adjusted spray equipment, apply one seal coat and one topcoat at a target wet mil thickness on two 36" × 24" (915 mm × 610 mm) finish sanded, close-grained, hardwood plywood panels—one panel laying flat, one panel vertical.	Wet film is uniform and of acceptable (specified) thickness.	Chapter 51	Section Project 6-2
		Laps fan pattern 50% to achieve even surface coating.	Chapter 51	Section Project 6-2
		Holds spray gun at correct distance 6"–8" [150 mm–200 mm] and perpendicular to work surface.	Chapter 51	Section Project 6-2
		Applies fluid to work surface with smooth, parallel, continuous strokes.	Chapter 51	Section Project 6-2
		Seal coat properly sanded and prepared for topcoat.	Chapter 51	Section Project 6-2
		Surface is free from orange peel, pebbling, streaking, sagging, or other overspray defects.	Chapter 51	Section Project 6-2
		Topcoat exhibits a consistent sheen.	Chapter 51	Section Project 6-2

2	Given a properly prepared product, set up the spray equipment and apply one seal coat and one topcoat at a target wet mil thickness on two 36" × 24" (915 mm × 610 mm) finish sanded, close grained, hardwood plywood panels—one panel laying flat, one panel vertical.	Meets Level 1 performance standard.		
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Spray Guns

Pre-Operation Checklist				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1		Verifies proper viscosity and temperature of coating.	Chapter 51	
		Verifies atomization and pattern balance with flood test on vertical paper panel.	Chapter 51	
		Verifies that trigger is functional and nozzle tip and ports are clean.	Chapter 51	
		Verifies operator has free movement through the spraying motions required and that hoses and pots are unobstructed.	Chapter 51	
2		Interprets Product Data Sheet and adjusts fluid viscosity as required.	Chapter 51	
		Selects and installs appropriate air cap and fluid needle and nozzle.	Chapter 51	

		Adjusts air and fluid knobs to achieve optimal spray rate and fan pattern.	Chapter 51	
		Meets Level 1 performance standard.		
Operation—Spray Toners (Dye or Pigmented)				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
2	Given a properly prepared product, set up the spray equipment and apply toner at a target wet mil thickness on two 36" × 24" (915 mm × 610 mm) finish sanded, close-grained, hardwood plywood panels.	Wet film is uniform and of acceptable (specified) thickness.	Chapter 51	
		Laps fan pattern 50% to achieve even surface coating.	Chapter 51	
		Holds spray gun at correct distance 6"–8" [150 mm–200 mm] and perpendicular to work surface.	Chapter 51	
		Applies fluid to work surface with smooth, parallel, continuous strokes.	Chapter 51	
		Starts and stops stroke at the beginning and end of each pass so as to properly coat panel without wasting material.	Chapter 51	
		Seal coat properly sanded and prepared for topcoat.	Chapter 51	
		Surface is free from orange peel, pebbling, streaking, sagging, or overspray defects.	Chapter 51	
		Consistent sheen and surface reflective quality is achieved.	Chapter 51	
		Leaves gun in a clean condition.	Chapter 51	
		Meets Level 1 performance standard.		

Spray Guns

Pre-Operation Checklist				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
1		Verifies proper viscosity and temperature of coating.	Chapter 51	
		Verifies atomization and pattern balance with flood test on vertical paper panel.	Chapter 51	
		Verifies that trigger is functional and nozzle tip and ports are clean.	Chapter 51	
		Verifies operator has free movement through the spraying motions required and that hoses and pots are unobstructed.	Chapter 51	
2		Interprets Product Data Sheet and adjusts fluid viscosity as required.	Chapter 51	
		Selects and installs appropriate air cap and fluid needle and nozzle.	Chapter 51	
		Adjusts air and fluid knobs to achieve optimal spray rate and fan pattern.	Chapter 51	
		Meets Level 1 performance standard.		

Operation—Spray Complex Surfaces				
Level	Objective	Performance Standard	Textbook Chapter	Lab Workbook Material
2	Given a properly prepared product and spraying facility, set up gun and accessories for and apply a clear spray finish to the inside and outside of a five-sided MDF box, or equivalently complex assembly, (approx 24" h × 24" w × 16" d), with one seal coat and one topcoat.	Wet film is uniform and of acceptable (specified) thickness.	Chapter 51	
		Laps fan pattern 50% to achieve even surface coating.	Chapter 51	
		Holds spray gun at correct distance 6"–8" [150 mm–200 mm] and perpendicular to work surface.	Chapter 51	
		Applies fluid to work surface with smooth, parallel, continuous strokes.	Chapter 51	
		Surface is free from orange peel, pebbling, streaking, sagging, or overspray defects.	Chapter 51	
		Consistent sheen and surface reflective quality is achieved.	Chapter 51	
		Leaves gun in a clean condition.	Chapter 51	