Powder Coating Booth & Oven Safety Inspection Checklist

Site / Project		**Address**	
Inspector name		**Company**	
Date		**Time**	

Documentation aid only. Adapt this resource to the site, manufacturer instructions, and applicable local requirements. It does not replace a competent person, professional judgment, legal advice, or a required statutory form.

Inspection checklist

Booth Ventilation & Airflow

☐	Verify booth airflow is within the manufacturer's specified range (typically 100-120 linear feet per minute) using an anemometer. Record readings.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Inspect the pressure drop across the filters. Ensure it's within the recommended range indicated by the filter manufacturer. Replace filters if necessary.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Examine exhaust ductwork for any signs of dust accumulation, damage, or leaks. Clean or repair as needed.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Verify the powder recovery system (e.g., cyclone, baghouse) is functioning correctly and efficiently collecting overspray. Check for blockages.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Inspect the compressed air supply for moisture or oil contamination. Ensure air is clean and dry to prevent powder clumping and application issues.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Test airflow alarms (if equipped) to ensure they activate when airflow drops below the setpoint. Document test results.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Inspect the booth enclosure for any gaps or openings that could allow powder to escape. Seal any openings.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Measure static pressure within the booth. Compare to the manufacturer's specifications. Investigate any deviations.	☐ Pass	☐ Fail	☐ N/A	Notes:

Inspect filter seals for proper seating and integrity. Replace damaged seals immediately.	Pass	Fail	N/A	Notes:
Visually inspect interior of ductwork (where accessible) for excessive powder buildup. Schedule cleaning if needed.	Pass	Fail	N/A	Notes:

Grounding & Bonding

Verify grounding hook continuity to the booth ground using a multimeter. Resistance should be less than 1 ohm.	Pass	Fail	N/A	Notes:
Ensure the electrostatic spray gun is properly grounded. Check the grounding cable for damage and secure connections.	Pass	Fail	N/A	Notes:
Confirm that parts being coated are properly grounded before spraying. Use a grounding clamp or fixture.	Pass	Fail	N/A	Notes:
Inspect the booth's grounding system for corrosion or damage. Ensure all connections are tight and secure.	Pass	Fail	N/A	Notes:
Verify that all solvent containers within the booth are properly grounded and bonded to prevent static buildup.	Pass	Fail	N/A	Notes:
Visually inspect all grounding wires for cuts, frays, or loose connections. Repair or replace as needed.	Pass	Fail	N/A	Notes:
Measure the resistance to ground of the booth structure. It should be less than 1 ohm.	Pass	Fail	N/A	Notes:
Inspect the spray gun cable for damage, kinks, or wear. Replace if necessary.	Pass	Fail	N/A	Notes:
Ensure all grounding points are clean and free from paint or other coatings that could impede conductivity.	Pass	Fail	N/A	Notes:
Document the date and results of the last grounding continuity test. Ensure tests are performed weekly.	Pass	Fail	N/A	Notes:

Oven Safety

Verify oven temperature is within the specified range for the powder being cured. Use a calibrated thermometer.	Pass	Fail	N/A	Notes:
Check for gas leaks around the oven using a combustible gas detector. Pay close attention to connections and fittings.	Pass	Fail	N/A	Notes:
Ensure oven ventilation is functioning properly to remove solvent vapors and prevent buildup of combustible gases.	Pass	Fail	N/A	Notes:

Test oven interlocks (e.g., door switches, airflow sensors) to ensure they shut down the oven in case of a malfunction.	Pass	Fail	N/A	Notes:	
Verify the emergency shutoff switch for the oven is easily accessible and functioning correctly.	Pass	Fail	N/A	Notes:	
Inspect the interior of the oven for powder buildup. Clean regularly to prevent fire hazards.	Pass	Fail	N/A	Notes:	
Verify the oven temperature controller is calibrated. Schedule recalibration as needed.	Pass	Fail	N/A	Notes:	
Inspect oven door seals for damage or deterioration. Replace if necessary to prevent heat loss and maintain temperature control.	Pass	Fail	N/A	Notes:	
Visually inspect the burner flame for proper color and stability. Report any unusual flame characteristics.	Pass	Fail	N/A	Notes:	
Confirm the oven purge cycle is functioning correctly before each startup to remove any accumulated gases.	Pass	Fail	N/A	Notes:	

Housekeeping & Combustible Dust Control

Inspect all surfaces (floors, walls, equipment) for dust accumulation. Remove any visible dust using a vacuum with a HEPA filter.	Pass	Fail	N/A	Notes:	
Verify the vacuum system used for dust removal is properly grounded and designed for combustible dust. Empty dust collectors regularly.	Pass	Fail	N/A	Notes:	
Minimize the use of compressed air for cleaning, as it can create dust clouds. Use vacuuming or wet wiping methods instead.	Pass	Fail	N/A	Notes:	
Ensure spill control materials (e.g., absorbent pads) are readily available for powder spills. Clean up spills immediately.	Pass	Fail	N/A	Notes:	
Inspect the dust collection system for leaks or damage. Repair or replace as needed.	Pass	Fail	N/A	Notes:	
Verify all electrical equipment in the area is rated for Class II, Division 1 or 2 environments to prevent ignition of combustible dust.	Pass	Fail	N/A	Notes:	
Eliminate potential ignition sources (e.g., open flames, smoking, hot surfaces) from the powder coating area.	Pass	Fail	N/A	Notes:	
Check light fixtures for dust buildup. Clean regularly to prevent overheating and potential ignition.	Pass	Fail	N/A	Notes:	

Review and adhere to the established housekeeping schedule for powder coating areas. Document cleaning activities.	Pass	Fail	N/A	Notes:	
Conduct regular dust explosibility testing to determine the Lower Explosive Limit (LEL) and Minimum Ignition Energy (MIE) of the powder being used.	Pass	Fail	N/A	Notes:	

Personal Protective Equipment (PPE)

Verify that all personnel are wearing appropriate respirators (e.g., N95, PAPR) when working in the booth or handling powder.	Pass	Fail	N/A	Notes:	
Ensure that all personnel are wearing appropriate eye protection (e.g., safety glasses, goggles) to prevent powder from entering the eyes.	Pass	Fail	N/A	Notes:	
Verify that personnel are wearing appropriate gloves to protect their skin from powder and solvents.	Pass	Fail	N/A	Notes:	
Ensure personnel are wearing appropriate clothing (e.g., long sleeves, long pants) to minimize skin exposure to powder.	Pass	Fail	N/A	Notes:	
Confirm that personnel are wearing static-dissipative clothing to prevent static buildup, especially when using electrostatic spray equipment.	Pass	Fail	N/A	Notes:	
Inspect all PPE for damage or wear. Replace damaged PPE immediately.	Pass	Fail	N/A	Notes:	
Verify that personnel have been properly fit-tested for their respirators. Document fit-testing results.	Pass	Fail	N/A	Notes:	
Ensure that an adequate supply of PPE is readily available for all personnel.	Pass	Fail	N/A	Notes:	
Verify that personnel have been trained on the proper use, maintenance, and storage of PPE.	Pass	Fail	N/A	Notes:	
Establish a procedure for cleaning and maintaining PPE. Ensure PPE is cleaned regularly.	Pass	Fail	N/A	Notes:	

Findings

#	Item	Location	Severity	Action required
1				
2				
3				
4				
5				
6				
7				
8				

Signature

Inspector signature _____ **Name** _____

Date _____