Composites Lab Safety Checklist

Inspector Name: _____ Date: _____

Location/Lab: _____

General Facility & Supervision

[ ] Teacher is available in the shop whenever students are present.
[ ] Appropriate work zones are clearly marked around all equipment.
[ ] Freezers: Materials are stored in an orderly manner, emergency door release operates properly, and there is no buildup of ice.

Personal Protective Equipment (PPE)

[ ] Safety glasses with side shields are required and worn.
[ ] Chemical goggles are available for working with chemicals.
[ ] Closed-toe shoes are required and worn in the lab.
[ ] Tyvek suits and latex gloves are available for working with chemicals.
[ ] Respirators are available for working with chemicals. (Students must be medically certified to wear them).
[ ] Respirators are cleaned before and after use and stored correctly.
[ ] Eyewash/shower station is available, inspected weekly, and the inspection is documented.

Chemical Safety & Flammable Storage

[ ] Chemical use areas are strictly separated from hot work and grinding areas.
[ ] Chemicals are properly stored.
[ ] Chemical inventory is up to date and Safety Data Sheets (SDS) are available.
[ ] All chemical containers are labeled with the manufacturer's labels (no homemade labels).
[ ] Flammables exceeding 25 gallons are stored in a flammable storage cabinet.
[ ] Flammable storage cabinets are not loaded past capacity.
[ ] Flammable liquids (paints, solvents, resins, etc.) are strictly prohibited from being stored outside properly rated flammable liquid cabinets.

[ ] Liquids are stored in original containers with proper lids only (no makeshift containers like milk jugs with rags).

Power & Electrical

[ ] Emergency stop button is available and properly labeled.
[ ] All equipment features a positive on/off switch or stand-alone electronic device to prevent auto-starting in the event of a power failure.
[ ] Stationary equipment is plugged into a permanent power source (no extension cords, power strips, or multiplex adapters).
[ ] Cords on all equipment are intact with no cuts, deterioration, or bare wires.
[ ] Extension cords are in good repair, equipped with a ground, and used *only* as temporary power for handheld tools. (Two-wire zip cords are prohibited).
[ ] Extension cords do not create a trip hazard.

Compressed Air

[ ] Limiting device restricts air pressure to no higher than 30 PSI.
[ ] No PVC/CPVC piping is used for distribution lines.
[ ] Compressed air is not used for cleaning workstations or people.
[ ] Hoses are in good repair, coiled, and stored in an organized fashion to prevent trip hazards.

Specialized Lab Equipment

Autoclave:

[ ] Equipped with operating interlocks.
[ ] Maintenance is completed and documented according to manufacturer requirements.

Oven:

[ ] Oven is locked when heated.
[ ] Installed under a proper ventilation hood.
[ ] Maintenance is completed and documented according to manufacturer requirements.

Cutting Table:

[ ] Emergency stop button (red) is labeled.
[ ] Pause button (yellow) is labeled.
[ ] Operator manual is immediately available.
[ ] Maintenance is performed per manufacturer instructions.

Laser Engraver:

[ ] Exhaust hose is free of kinks, damage, holes, or blockages.
[ ] Interlocks between the laser and the exhaust fan operate properly.

Paint Booth

[ ] Appropriately rated electrical equipment is installed without modification (Class 1/Division 1 explosion-proof fittings/fixtures inside and within 3 feet of the front of the booth).
[ ] No electrical cords or appliances are run into the booth.
[ ] Filters are clean and cover the entire filter grid.
[ ] Minimum 100 FPM draw at the face of the booth, and flow meter operates properly.
[ ] Fire sprinklers are installed if the booth is greater than 9 sq ft (in both the booth and plenum).
[ ] Fire sprinkler heads are protected by a paper bag to prevent overspray accumulation.
[ ] Walls, floor, plenum, and fans are clear of overspray.
[ ] No storage of flammable or combustible material inside the paint booth.

Machinery & Power Tools

Handheld Tools & Grinders:

[ ] All handheld tools are in good repair.
[ ] Handheld grinders have properly sized wheels and installed guards. Grinding is performed in an area with mechanical ventilation.

Bench Grinders:

[ ] Base is secured to the floor or work surface.
[ ] Spindle guard is present and covering the spindle.
[ ] Tool rest is adjusted to within 1/8 inch of the wheel.

[ ] Tongue guard is adjusted to within ¼ inch of the wheel.

[ ] Wheels are dressed, properly sized, and not worn beyond their safe use limit (e.g., indicated by the paper sticker).

[ ] Grinding is performed in an area equipped with a mechanical ventilation system.

Bandsaws:

[ ] Base is secured to the floor or work surface.

[ ] Unused portion of the blade is covered by the guard.

[ ] Guards are lowered to completely cover the blade when not in use.

Drill Presses:

[ ] Base is secured to the floor or work surface.

[ ] Equipped with a chuck guard or a keyless chuck.

[ ] In good working condition.

[ ] Clamps are available for securing small pieces.

Jointers:

[ ] Guard automatically returns to completely cover the blade.

[ ] Proper working clearances are maintained.

[ ] Fence is secure and rigid.

[ ] Push sticks are available and actively used.

Miter Saws / Chop Saws:

[ ] Guards are properly installed and working.

[ ] Work area is adequately sized for the material being cut.

[ ] Saw base is secured to a solid surface.

Planers:

[ ] Blades are sharp.

[ ] Housing or guard completely covers the blades.

[ ] Machine automatically returns to the starting point when released.

[ ] Anti-kickback device is installed.

Table Saws:

[ ] Blade guards are installed (Saw Stops are NOT exempt from guarding, except for custom/Dado cuts).

[ ] A fence or sled is installed when in use (except for custom/Dado cuts).

[ ] Spreader is installed behind the blade.

[ ] Anti-kickback device is installed.

[ ] Push sticks are available and actively used.