

Tips from the Toolbox

THE TOP 4 RISKS IN WOODWORKING

Risk Management Brief from PLM

Woodworkers are skilled at working with their hands, adept at managing dangerous equipment and working in high-risk environments. But knives, saws, hammers and a variety of blades aren't the only risks that should caution woodworkers and facility owners. Less obvious risks also lurk in woodshops and manufacturing facilities. PLM explores the top dangers threatening woodshop facilities every day—the general liability and property exposures that could bring the entire business to a grinding halt.



1. WOOD DUST

Wood dust is a nearly invisible threat and the top hazard to woodworking facilities. When exposed to an ignition source, tiny, highly-combustible wood particles can serve as the eager fuel for fires and explosions. Wood dust is particularly dangerous when it is allowed to build up in cracks, crevices and corners. Wood dust fires and explosions are often started by open flames, uncontrolled smoking, impact sparks, hot work (grinding, welding, torching) or out-of-date, faulty, or poorly maintained electrical equipment.

To protect your facility from wood-dust related fires, good housekeeping is key:

- *Ensure that wood dust is not building up and that electrical equipment is protected or moved from any potential buildup areas. Dust buildup any thicker than a dime creates an exposure.*
- *Have dust control equipment in place. Specifically, use a dust collection system with its own safety shut-off and alarm system. Dust collection systems use a hose to vacuum*

the dust into the dust collection system. Inside a properly engineered system, an infrared detector will trigger a flame suppression system if it detects hot material in the duct work. When this detector is triggered, the dust collection system will spray a mist, extinguishing the spark like a sprinkler system.

- *Managers, owners and operators should service and maintain all equipment regularly.*
- *Ventilation systems and ducts should be checked often to ensure no blockage is present.*
- *Conduct daily cleanings including floors, walls, ledges and ceilings to reduce sawdust buildup.*

2. OILY RAGS

Oil-soaked rags have a habit of piling up in any woodshop. Though a simple tool, rags are handy for applying stains and finishes—but those chemicals turn the rags into potent, highly flammable fuel for fires. If an oily rag is then thrown in a corner or into the trash, it could spontaneously combust into fire. Spontaneous combustion and chemical reactions are a major cause of fires in the U.S., according to the National Fire Protection Association. Spontaneous combustion occurs when an object increases in temperature without pulling in heat from its immediate area.

- *Store oily rags in a UL-certified or FM-approved metal can that has a self-closing top on it so if they do combust inside, the fire can't escape.*
- *Ensure rag cans are emptied at the end of each day, or more frequently as needed.*





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3. STORAGE OF FLAMMABLES

In woodworking shops, solvents, lacquers and thinners are nearly as common as wood dust. Most users know to avoid open flames when applying these products, but they can also prove to be dangerous while sitting on the shelf. Without proper storage, they can be exposed to an ignition source or spontaneously combust—fueling fatal fires.

- Store flammables in UL-certified or FM-approved cabinets that are properly grounded. These cabinets have a fire rating, so their doors are durable and fire resistant. If a fire ignites in the cabinet, the cabinet can contain the fire. These cabinets are grounded to a piece of metal as an additional safety measure, so static electricity doesn't build up inside and serve as an ignition source for solvents, thinners and lacquers.
- Follow laws related to the proper disposal of this hazardous waste and report emissions according to state guidelines.

4. GLUE

Like solvents, lacquers and thinners, solvent-based glue (commonly referred to as red glue) can also be very dangerous within a woodshop or manufacturing facility. Red glues emit vapors that are highly flammable and could impair or sicken those who breathe in the vapors. Woodshop workers use a considerable amount of glue, particularly red glue, which most workers favor because it really sticks. It is so strong, it is often used to secure laminate countertops. The vapors, which are heavier than air, sink to the floor where they

accumulate and can easily find an ignition source, like a hot water heater, electrical outlet or furnace with an open flame and cause an explosion.

- Use water-based glues (commonly referred to as yellow glue) over red glue where possible and don't use red glue while in a confined space but in an approved booth protected by a fire suppression or automatic sprinkler system.
- Use an exhaust fan to pull the dangerous vapors from the room.
- Even in storage, red glue poses a risk to the facility, so large drums of glue should be stored outside the building in an approved flammable liquids storage room as per the NFPA 30 Flammable and Combustible Liquids Code.

KEEP IT TIDY

The best way to reduce these risks is to be attentive and neat:

- Keep up with housekeeping and perform quality control checks to make sure the space is properly cleaned and maintained.
- Regular facility checks are also critical to make sure flammable items are not left to pile up, and to make sure that chemicals and solvents are being closed and stored properly at the end of each work day.

The risks are real, but with proper checks in place, you can be sure you are doing your best to keep facilities safe for employees and protected from an extensive fire that could prove costly or terminal for your business.



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