Wood Dust Exposure Meeting Kit

WHAT'S AT STAKE

Combustible wood dust in the workplace presents a risk of both fire and explosion if not managed effectively. A dust explosion or serious fire can cause catastrophic loss of life, injuries, and destruction of buildings.

WHAT'S THE DANGER

THE DANGERS OF WOOD DUST PRODUCTION

Wood dust is created during all stages of wood processing such as sawing, routing, sanding and other operations. Workers can also be exposed when the dust becomes airborne such as when removing dust from furniture, maintenance activities, or when cleaning equipment (e.g., emptying the bag from a dust extraction system or vacuum).

Wood processing causes small particles of wood dust to become airborne. Workers can inhale these particles. A person's upper respiratory system can filter out the larger particles, but smaller particles can go deep into the lungs causing damage and scarring to the lung tissue. Each time this happens a small amount of irreversible damage occurs. This damage reduces the lungs' ability to take in oxygen and over time makes it increasingly difficult to breathe.

Wood Dust Health Risks for Workers

- Inhaling dust into the lungs can cause breathing problems and lead to lung diseases such as occupational asthma and lung cancer. Breathing in dust is the most common type of exposure to wood dust.
- Getting dust in the eyes can cause irritation and damage.
- Skin contact with wood dust can cause ulceration of the skin, irritation, and dermatitis.

Specific Activities That Cause High Dust Exposures When Working

- sawing and cutting
- routing and turning
- sanding
- dry sweeping of dust

- use of compressed air
- bagging dust from dust extraction systems.

HOW TO PROTECT YOURSELF

CONTROL WOOD DUST EXPOSURE FOR WORKERS

In most cases personal protective equipment (PPE) such as RPE shouldn’t be the first or only control considered. Elimination and engineering controls such as LEV are more effective than administrative controls and PPE.

- Use on-tool extraction on saws and grinders to control wood dust at source.
- Refer to the manufacturer’s operating instructions for equipment use and maintenance.
- Use water damping methods where practical.
- Don’t use blowers, fans, or compressed air to move wood dust.
- Provide a suitable industrial vacuum to remove dust from work areas.
- Minimize worker exposure by limiting the time each person spends doing dusty work.
- Advise workers to wear respiratory protection equipment (RPE) when emptying vacuum cleaner bags or collection bags – there is a potential for high wood dust exposure.
- Ensure workers wear RPE and other personal protection equipment (PPE) suitable for the task. Advise workers to remove work clothing such as overalls carefully at the end of the task or shift to avoid generating dust clouds.
- Provide washing facilities at work so dust is not taken home.
- Eliminate risk by buying pre-cut or processed wood materials.
- Know which type of wood is being used and all hazards associated with that wood.
- Substitute with another type of wood with no or fewer known health effects, where possible.
- Reduce dust generation. For example, reduce the need to cut or shape the wood.
- Use an appropriately designed industrial ventilation system, including local ventilation exhaust and the use of high-efficiency particulate (HEPA) filters. The design of the ventilation system will depend on the equipment being used (sanders, shapers, routers, saws, etc.).
- Keep tools and blades sharp. As tools dull, they may release more dust into the air.
- Be aware that significant exposure can happen when cleaning (e.g., emptying dust bags) or maintaining equipment.
- Practice good housekeeping. Keep surfaces and floors clear.
- Use cleaning methods that reduce re-introducing the dust into the air. Use wet clean-up methods (e.g., wipe surfaces with a wet rag or mop) or use a vacuum with a HEPA filter.
- Read, understand, and follow health and safety information on the safety data sheet (where available and applicable).
- Inform employees about the hazards of wood dust exposure, safe work procedures, how to identify when a ventilation system is working appropriately, and the importance of control measures.
- Use protective clothing and gloves to reduce skin exposure.
- Practice good personal hygiene (e.g., wash or shower to remove dust from skin). Wash hands and face when finished a task, and before eating,

drinking or smoking. Clean clothes by washing or using a vacuum when washing facilities are not available.
- Bag and seal dust waste to prevent dust from re-entering the air.
- DO NOT use compressed air to blow dust off of furniture, equipment or clothing.
- To prevent a combustible dust explosion, DO NOT allow wood dust to accumulate, including on ledges, ceiling beams, light fixtures, hidden areas, etc.

WORKER TRAINING IS THE BEST PROTECTION FOR WORKERS

Educate workers about risks from wood dust and the control measures. Regular training is important to ensure worker awareness remains high. Training should include information on:

- The health risks from exposure to wood dust.
- Safe work practices to follow when wood dust is created.
- How to use and maintain LEV systems.
- Appropriate use and care of PPE (including protective clothing and RPE).

FINAL WORD

Cutting, processing, and finishing wood can produce significant amounts of dust that may result in a number of health-related issues. There are a wide variety of control measures that can be put in place to help reduce elevated dust levels from choosing tools that can help reduce dust creation to cleaning procedures as well as wearing appropriate respiratory protection equipment.