Wood Dust Meeting Kit

Wood Dust

Dangers of Wood Dust Safety Talk

Wood dust is 1 of 119 agents listed as “carcinogenic to humans” by the International Agency of Research on Cancer also known as IARC. A carcinogen is defined as any substance or agent that tends to produce a cancer. Many individuals are exposed to wood dust both in the workplace and at home.

OCCUPATIONS AT RISK FOR EXPOSURE TO WOOD DUST

Using machines to cut, smooth or shape wood materials can expose workers to wood dust. These occupations are:

- Workers employed in logging, sawmills, furniture, and cabinet making.
- Carpenters.
- Cleaning or maintenance staff – activities where wood dust is generated.
- Construction workers.
- Shipbuilding workers.

CONTRACTING WOOD DUST BY WORKERS

Wood processing causes small particles of wood dust to become suspended in the air. 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. This damage reduces the lungs’ ability to take in oxygen and over time makes it increasingly difficult to breathe.

THE SAFETY HAZARDS

Concentrations of small dust particles in the air can form a mixture that will explode if ignited. This type of situation may occur in dust collection equipment. Wood dust will also burn easily if ignited.

Wood dust on the floor can cause tripping. Vision is impaired by airborne dust generated during wood processing.

HEALTH ISSUES FOR WORKERS WITH WOOD DUST

Irritation, coughing or sneezing are caused by the dust itself. Exposure to excessive amounts of wood dust may irritate the eyes, nose, and throat. Workers may also experience shortness of breath, dryness and sore throat, conjunctivitis (inflammation of the mucous membranes of the eye), and rhinitis (runny nose).

Dermatitis is common and may be caused by the chemicals in the wood. For dermatitis, the skin may become red, itchy, dry, or blister. Allergic contact dermatitis may also develop.

Respiratory system effects include decreased lung capacity, and allergic reactions in the lungs such as hypersensitivity pneumonitis (inflammation of the walls of the air sacs and small airways), and occupational asthma. Hypersensitivity pneumonitis may develop within hours or days following exposure and is often confused with cold or flu symptoms because it begins with headache, chills, sweating, nausea, breathlessness, etc. Tightness of the chest and breathlessness can be severe, and the condition can worsen with continued exposure. Some hypersensitivity pneumonitis conditions may be caused by moulds that grow on the wood.

Toxic effects are specific to the species of wood. The chemicals in the wood may be absorbed into the body through the skin, lungs, or digestive system. When the body absorbs the chemical, the chemical may cause headaches, loss of weight, breathlessness, giddiness, cramps and irregular heartbeat.

PROTECT WORKERS BY CONTROLLING WOOD DUST EXPOSURE

You should apply the most effective controls measures reasonably practicable. In most cases personal protective equipment (PPE) such as RPE shouldn’t be the first or only control considered. Below are some controls that can be used to manage wood dust. Elimination and engineering controls such as LEV are more effective than administrative controls and PPE.

- Eliminate the risk by buying pre-cut or processed wood materials.
- Local exhaust ventilation (LEV) is one of the most effective ways to control dust at the source. Use LEV systems to capture dust from
- cutting, shaping and sanding wood either by hand or machine.
- 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. For example, use the correct saw blade or planer for the task.
- 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.
- Minimise 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.
- 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.
- Advise workers to wash their face and hands immediately after finishing the task and before eating, or drinking.

BEST PRACTICES TO REDUCE OVEREXPOSURE TO WOOD DUST

- Engineering controls are the most effective way to prevent dust from becoming airborne or left to collect in the workplace. Ventilation systems or collection systems with collection points at the sources creating dust is a common effective engineering control.
- Good housekeeping is important in work environments that create a lot of wood dust.
- Use respirators when engineering controls are not enough to protect you from overexposure to wood dust.
- Avoid the point of operation of a work task or equipment that creates a lot of dust whenever possible.
- Do not use compressed air to clean work surfaces—use a vacuum with a high-efficiency air (HEPA) filter instead.
- If feasible, use local exhaust ventilation to capture and remove dust from woodworking equipment.
- Ensure dust control equipment is properly maintained.
- Use wet methods where appropriate to minimize dust generation.

FINAL WORD

Many tools and pieces of equipment used in wood manufacturing or woodworking have engineering controls to protect the user. It is important to use these controls to reduce exposure to this dust.