

Wood Dust

Wood dust is created when machines are used to cut, shape or smooth wood materials. Industries that have a high risk of wood-dust exposure include sawmills, planer mills, dimension mills, furniture industries, cabinet makers and carpenters. Wood dust can present both health and safety hazards.

Health Hazards/Effects

Wood dust is classified as a hazardous chemical that is subject to the Hazard Communication standard. Health effects associated with exposure to wood dust include dermatitis and allergic respiratory reactions. Workers sensitized to wood dust can suffer severe allergic reactions (such as asthma) after repeated exposure. Other symptoms include eye irritation, nasal dryness and obstruction, prolonged colds and frequent headaches.

Biological contaminants such as the molds and fungi often found growing on tree bark also can cause health problems. The natural chemicals in the wood that appear to be associated with allergic reactions are found in the inner parts of the tree or heartwood.

Cancers have been associated with wood dust exposure, and both hardwood and softwood dust are potentially carcinogenic to humans. Cancers associated with wood dust exposure are nasal and sinus-cavity cancer, lung and other cancers, and Hodgkin's disease.

Wood can contain chemical contaminants. These may include herbicides, pesticides or other chemicals to assist in preservation of the wood. Common wood preservatives are arsenic, chromium, copper, pentachlorophenol and creosote. Processing treated wood may create wood dust that contain those chemicals, compounding the potential health effects.

Workers in oriented strand board (OSB) manufacturing facilities may be exposed to methylene diisocyanate (MDI) and phenol-formaldehyde, which presents health hazards that must be addressed.

Safety Hazards

Each year, facilities are severely damaged or destroyed by wood-dust fires and explosions. Concentrations of small dust particles in the air can form a mixture that will explode if ignited. These concentrations occur frequently in dust extraction equipment. Explosions can dislodge deposits of dust on walls, floors and ledges. These dislodged deposits can then ignite, causing secondary explosions.

Wood dust burns readily if ignited. Fires can be started by badly maintained heating units, overheated electric motors, electric sparks, static electricity and sparks from other sources such as open wood-burning stoves or cigarettes.

Wood dust on the floor can cause tripping or slipping, and vision can be impaired by airborne dust.

Safe Work Practices

Methods to minimize wood dust:

- Use good housekeeping practices.
- Do not use compressed air to clean work surfaces.
- Sweep or vacuum the dust to prevent accumulation.
- Use local exhaust ventilation to remove dust from woodworking equipment.
- Properly maintain dust control/collection equipment.
- Use wet methods where appropriate to minimize dust.
- Use respiratory protection when other control measures do not reduce exposures below the permissible limits or are not practical.
- Provide other personal protective equipment, such as gloves, overalls and eye protection as necessary.



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