

Toolbox Talk

Wood Dust

There are many construction activities that create fumes, vapors, mists, and dusts. Some of these are more obviously hazardous than others. A chemical smell, a product with warning symbols, or the constant reminders we hear for Asbestos and Silica. But what about saw dust?

Saw dust can present a few types of hazards. There are organic/biological organisms like mold and fungi that can create health issues if inhaled or made airborne and spread around a house. There are chemicals in treated lumber and plywood such as Alkaline Copper, Polymeric betaine, formaldehyde, and other adhesives. And lastly, OSHA classifies wood dust as a combustible dust with a potential for a dust explosion.

Health Effects

Wood dust is actually listed as a carcinogen to humans by the International Agency of Research on Cancer. Any time a fine particle can be inhaled in sufficient amounts, the macrophage (cells) inside the lungs attack the foreign material by surrounding it and creating a scar tissue. That hardened tissue eventually overwhelms the body leaving permanent cellular damage, aka cancer.

Additional effects from long term exposure include:

- Dermatitis
- Allergic respiratory effects
- Mucosal and non-allergic respiratory (runny nose)
- Asthma
- Hypersensitivity Pneumonitis (inflamed lungs)
- Chronic Bronchitis

Possible Solutions

This is a situation we want to refer to the [Hierarchy of Controls](#). Walking through the best options for the task at hand.

- Engineering Controls are the most effective way to protect people from airborne dust. Ventilation systems that filter dust out of the air and dust collection systems to contain the dust at the point of creation (i.e. a vacuum connection to a table saw)
- Personal Protective Equipment when engineering controls are not possible or cannot adequately control the dust.
 - Dust masks rated N95 or better are the minimum Respirator for PPE.
 - Wear gloves when handling Treated lumber, LVL, PSL, OSB, and Plywoods
- Good Housekeeping. Clean up wood dust as it starts to accumulate. A build up of 1/32nd of an inch is flammable and dangerous. [NFPA 654](#)
- Work in a well vented area and stay out of the dust cloud.

Summary

All dust is bad when it can be inhaled, even a 100% organic tree that you've raised from a seed. There are countless tasks in construction from the manufacturing of products to the final fit and finish that produce wood dust. Understand the products you work with and what options you have to minimize your risk.