

Nano-Enabled Wood Coatings and Stains

Engineered and manufactured nanomaterials are very small — many times thinner than a human hair. Products that contain engineered nanomaterials, are increasingly being used in construction. When workers cut, grind, sand, or disturb nano-enabled construction products, dust containing the engineered nanomaterial gets into the air that workers breathe. Some nanomaterials have been shown in the lab to cause health problems in test animals. Most have not been thoroughly tested.

Janet's Story

Janet works as a carpenter. She is using an orbital sander to sand wood coated with a new nano-enabled product. The product is supposed to keep the wood from being damaged by water and sunlight. Sanding the wood creates a lot of dust in the air. She is concerned that breathing the dust may be harmful to her lungs and make her sick.

- ✂ **Have you or someone you know ever worked around hazardous dust? If yes, what was done to protect workers from breathing the hazardous dust?**
- ✂ **What could be done to prevent the dust from getting into the air?**

✂ **How could you find more information about the nano-enabled product that was used to coat the wood?**

Remember This

- Use a hose on your sander, running to an industrial vacuum with a HEPA filter. This system will capture the dust before it gets into the air.
- Use a respirator if the vacuum system does not capture all the dust or is not available. Your employer should provide you with the right type of respirator, as part of a full respiratory protection program required by OSHA.
- Ask your employer if the product you are working with is nano-enabled. This information may be available on the product label, the safety data sheet, or CPWR's electronic Library of Construction Occupational Safety and Health, in the section on nano: <http://nano.elcosh.org>.
- Wear goggles or a face shield to protect your eyes from the dust, and hearing protection to prevent hearing loss when running an orbital sander.

How can we stay safe today?

What will we do at the worksite to prevent exposure to dust from nano-enabled products?

1. _____

2. _____

OSHA Standard: 1926.56

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- ✘ Use a hose on your orbital sander, running to a vacuum with a HEPA filter to capture the dust before it gets into the air.
- ✘ Use a respirator if the vacuum does not capture all of the dust or when a vacuum system is not available.
- ✘ Wear goggles or a face shield to protect your eyes from the dust and hearing protection to prevent hearing loss.