

Dust Exposure A Risk to Woodworkers???

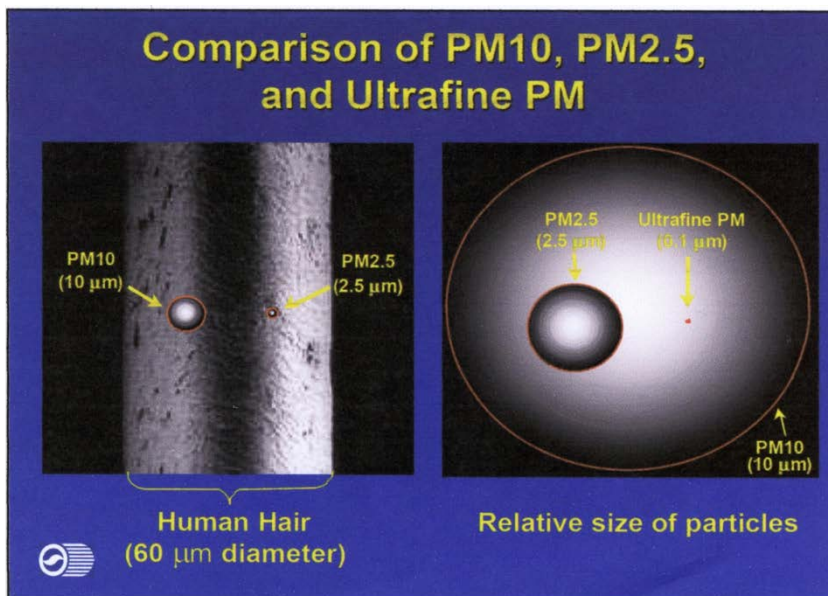
Dust Characteristics

- Size
- Composition (chemistry)
- Shape

'The Dose makes the Poison'

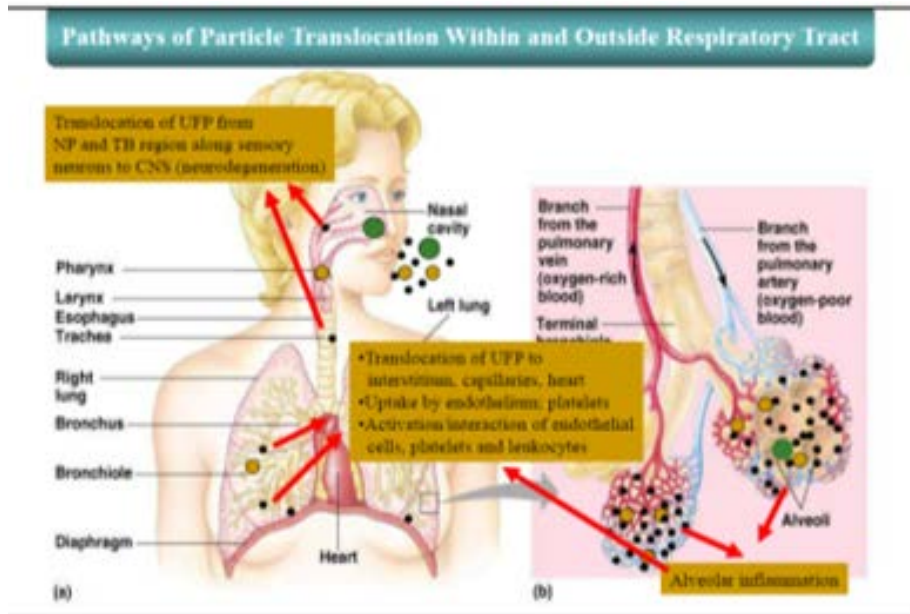
Five Sizes

- >50 microns, bullets, chips, chunks
- >10 & <50 microns, not necessarily inhalable
- >2.5 & <10 microns, inhalable, captured in nose and dust
- >1 & <2.5 microns, inhalable into bronchial area, invisible
- <1 micron, goes deep into the lungs and crosses blood barrier (goes into blood or brain)



More than 600 times smaller than human hair

Dust Deposition in Body



Sources of Dust

- >10 microns: abrasion, shavings, chips, wind blown dust & sea salt
- >2.5 micron: vapors, very fine saw dust
- < 2.5 microns: smoke, vapors, diesel & wood smoke
- <1 micron: chemically formed in the air by chemical reaction, condensing vapors

Chemistry/Composition

- Most wood dusts are not toxic unless it is a unique species that is poisonous or causes an allergic reaction; know your wood.
- Some powders from glue (the resin glue with formaldehyde) or milk paint (?) may be of concern.
- Sanding painted surfaces (lead, ???)
- Look at the MSDS for any product for its health hazards.

MATERIAL SAFETY DATA SHEET



Date Prepared: 04/01/2011
MSDS No: OFMP-1

The Old Fashioned Milk Paint Co., Inc.
436 Main Street P.O. Box 222
Groton, MA 01450-0222
Telephone No: (978)448-6336
Fax No: (978)448-2754
www.milkpaint.com
Emergency Telephone No: (978)448-6336

9000-71-9	Casein (milk protein)	Not established	Not established (non-hazardous)
1305-62-0	Calcium Hydroxide	15mg / m ³	Not established
Proprietary	Natural Chalk Fillers	15mg / m ³	10mg / m ³
Proprietary	Natural Clay Fillers	15mg / m ³	2mg / m ³
1309-37-1	Red Iron Oxide Pigment	15mg / m ³	5mg / m ³
1333-86-4	Lamp Black Pigment	3.5mg / m ³	3.5mg / m ³
51274-00-1	Yellow Iron Oxide Pigment	10mg / m ³	5mg / m ³
Proprietary	White Pigment Blend	15mg / m ³	10mg / m ³
57455-37-5	Ultramarine Blue Pigment	Not established	5mg / m ³
1308-38-9	Green Chrome III Pigment	5mg / m ³	5mg / m ³
12713-03-0	Raw Umber Brown Pigment	Not established	5mg / m ³
Proprietary	Natural Salts	Not established	5mg / m ³
14808-60-7	Crystalline Silica	0.1mg / m ³	0.1mg / m ³

"Note there are compounds in Milk Paint that are of concern and it suggests protection from the dusts is warranted during handling of the products by wearing a dust mask. This applies to preparation of the Milk Paint solution (while mixing with water) as well as during the sanding of the product after application."

Shape & Asbestos

- Shape is a key factor as it relates to asbestos particles and their health impacts. These particles scar the lung and make it susceptible to other chemicals.
- Asbestos is present in certain (old) manufactured products (wall board, tiles, insulation).

Special Circumstances?

- Combination of dust and other chemicals is bad: cigarette smoking and asbestos exposure led to cancer in the shipyard workers.
- Dust exposure when you have cold or flu (inflammation or fluids in the lungs) is not a good combination. Smokers tend to not want to smoke when they have a cold.

Dust Safety

- Wear a dust mask matching the severity of exposure: full face with supplied air; cartridge mask for dust or specific chemicals; disposable paper mask.
- Use dust collection systems. Wear mask when cleaning the vacuum system.
- Some machines throw fine dust in your face (sanding on a lathe, table saw, sanding, etc.); always wear a mask.
- Band saw, planer, jointer, router: safer

Don't Forget

- Safety goggles protect your eyes and keep dust and projectiles out of your eyes
- Hearing protection
- Hard hats (for falling pine cones...)