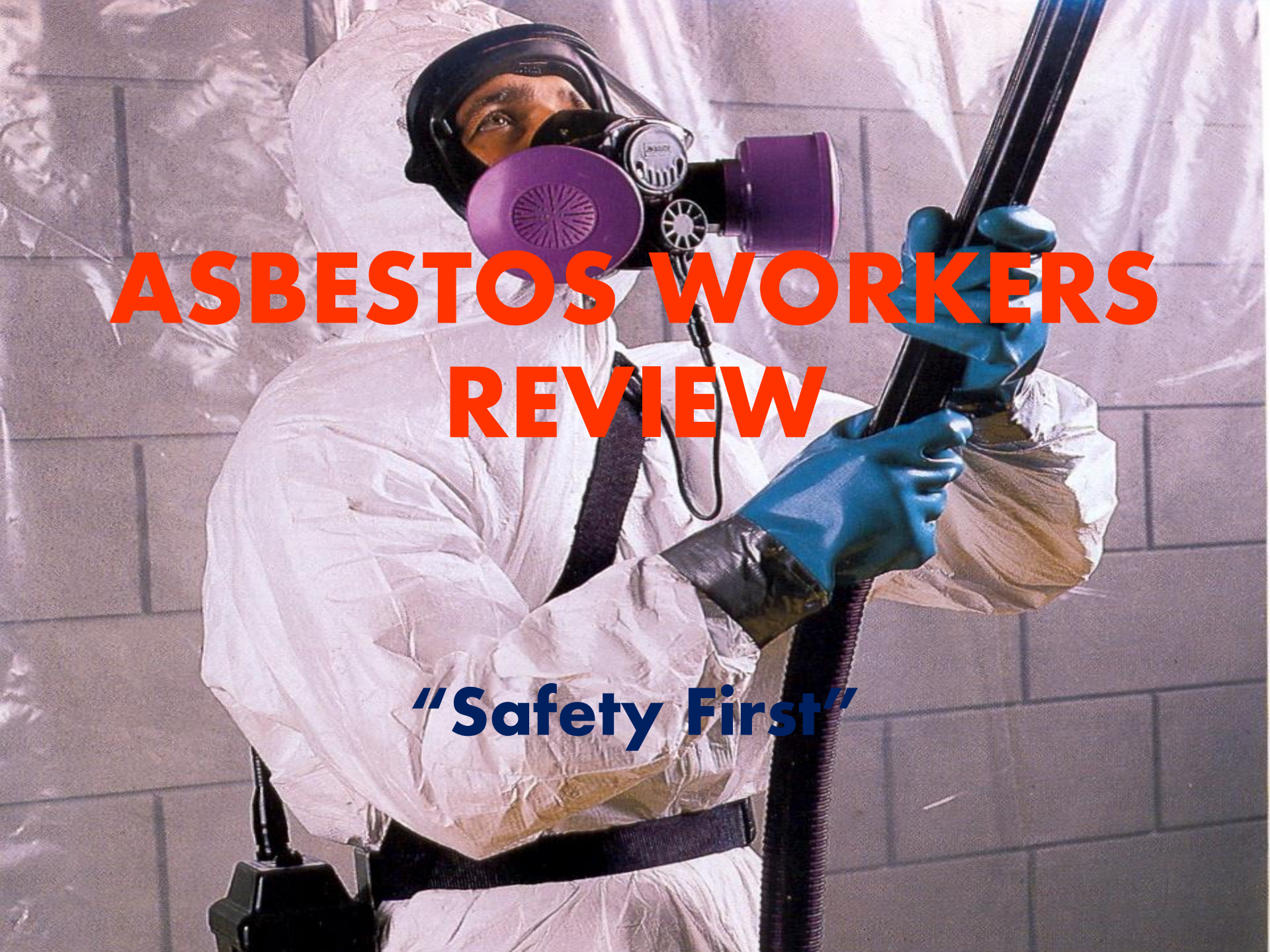


ASBESTOS WORKERS REVIEW

"Safety First"

Review Subjects

- Getting to Know Asbestos
- Uses of Asbestos
- Health Effects
- Respiratory Protection
- Control Methods
- Work Area Preparation
- Completion of the Work
- Cleaning & Waste
- Occupational Safety
- Regulations

IMPORTANT ABBREVIATIONS

▶**ACM**	=	Asbestos-containing material (>1% asbestos)
▶**PACM**	=	Presumed Asbestos-containing Material
▶**RACM**	=	Regulated Asbestos-Containing Materials
▶**AHERA**	=	Asbestos Hazard Emergency Response Act
▶**NESHAP**	=	National Emission Standards for Air Pollutants
▶**EPA**	=	Environmental Protection Agency
▶**OSHA**	=	Occupational Safety and Health Administration
▶**DHS**	=	Wisconsin Department of Health Services
▶**IDPH**	=	Illinois Department of Public Health
▶NAM	=	Negative Air Machine
▶PEL	=	Permitted Exposure Limit
▶STEL	=	Short Term Exposure Limit
▶PF	=	Protection Factor
▶MUC	=	Maximum Use Concentration
▶MUL	=	Maximum Use Concentration
▶TWA	=	Time Weighted Average

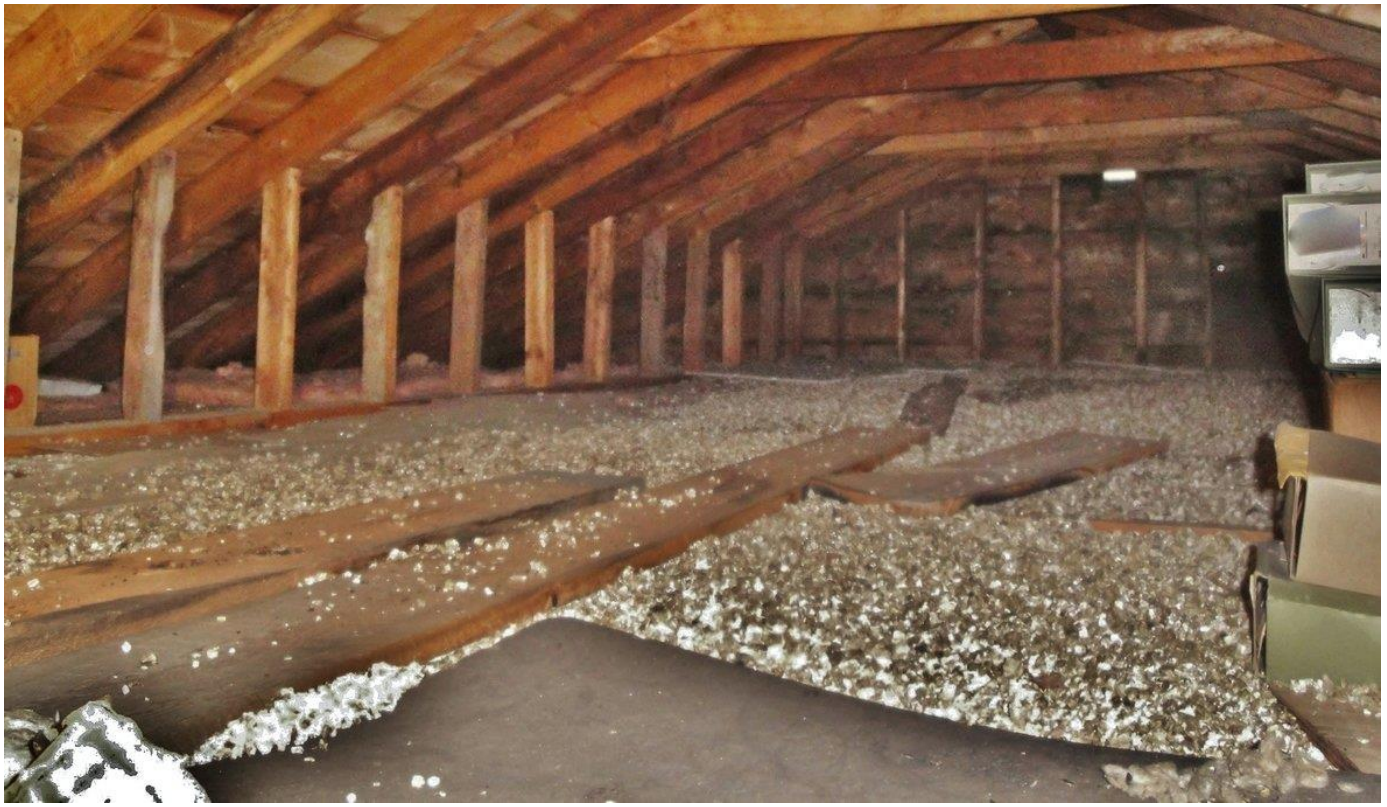
Here are Some Important Wisconsin Definitions

ACM

“a material or product containing >1% asbestos, as determined by the Polarized Light Microscopy (PLM) method, described in 40 CFR Part 763, Appendix E to Subpart E, Section I, and a material that meets the definition of material suspected of asbestos content.”

Suspected Asbestos-Containing Materials:

vermiculite insulation, and any other untested material used in building components, except (metal, glass, wood, or fiberglass)



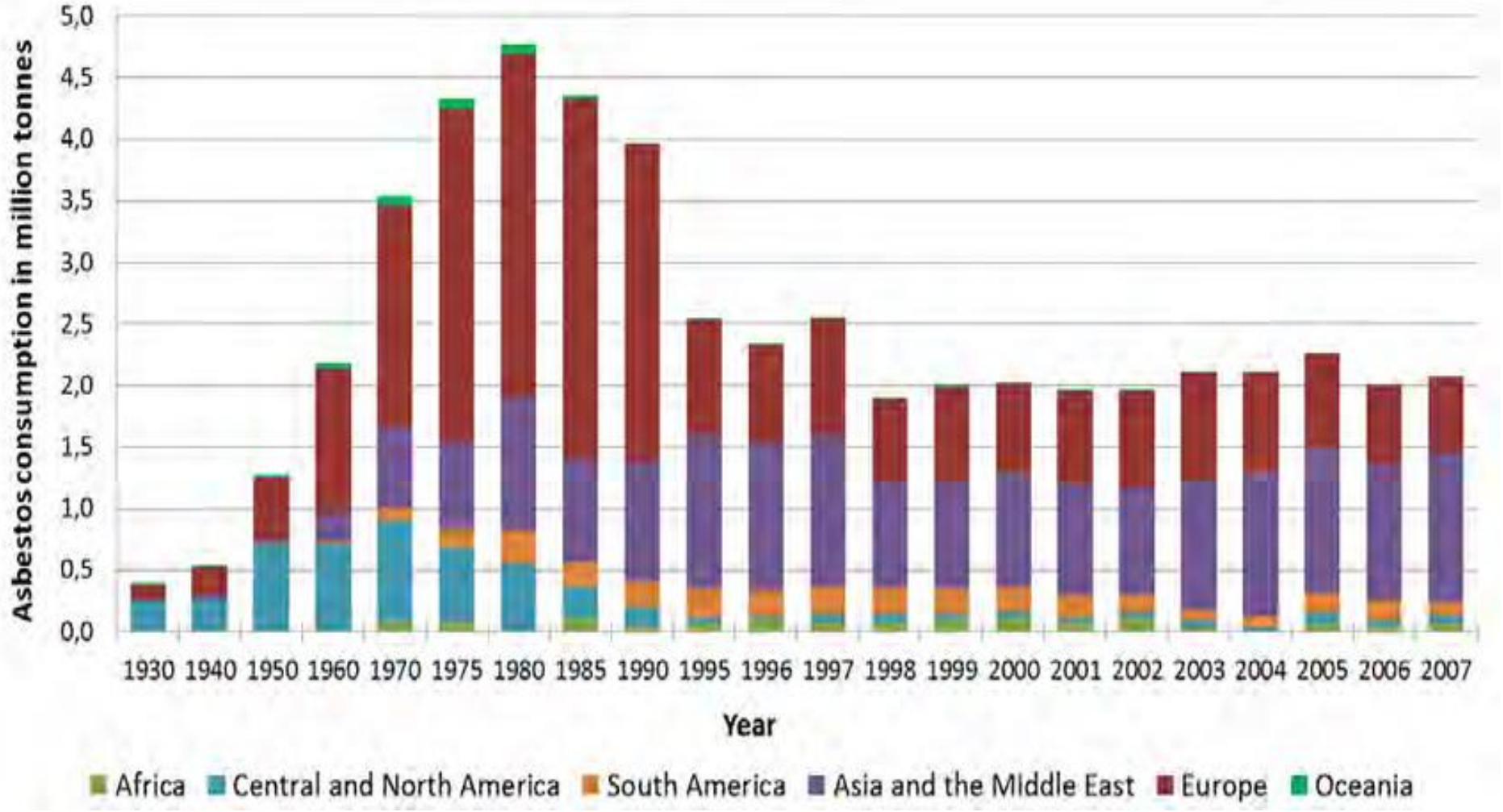
Important: All VERMICULITE INSULATION should be treated as an ACM, unless an EPA-designed method for identifying asbestos in vermiculite proves otherwise (A protocol has not yet been established).

ASBESTOS IN HISTORY

- ❑350 BC - Greeks used it in sacred lamps
- ❑Romans used it for tablecloths.
- ❑1918 to 1945 - Used during WWI and WWII.
- ❑1940s to 1980s - Mostly used in building products.
- ❑1960s - Began to be regulated.

Greek Slaves Mining

ASBESTOS CONSUMPTION IN THE WORLD



Source: United States Geological Survey (USGS, 2006 and from the values of production, exports and imports of each country.

WHAT IS ASBESTOS?

Asbesto (greek) or Amianto (latin)

- naturally occurring mineral, fibrous silicate,
  - mined for its excellent properties:
    - Thermal insulation,
    - Chemical and physical resistance (acids, stress, etc.)

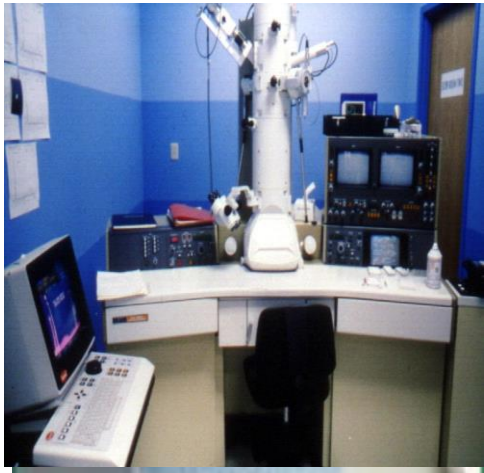
Commonly used as:

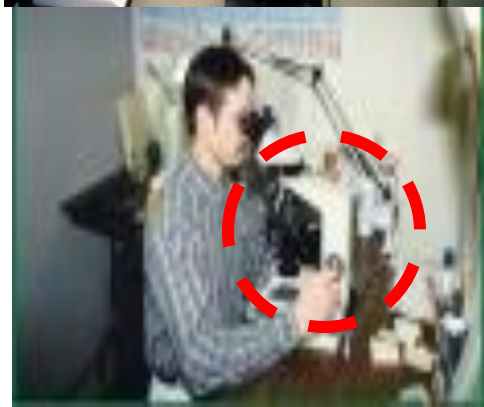
- Sound Insulator,
- Thermal Insulator,
- Fireproof,
- and other building materials.

Source: EPA

IDENTIFICATION

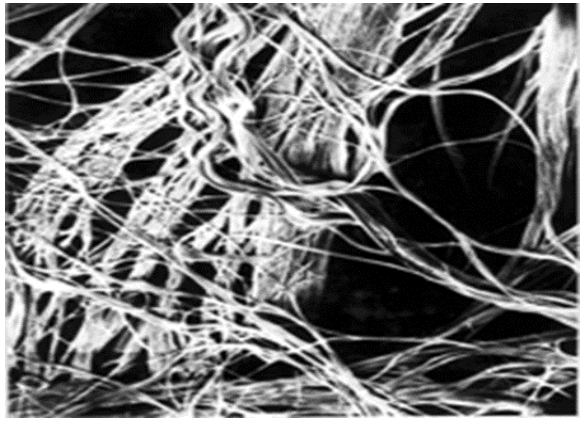
- The only way to know whether something is asbestos is by testing it.
- Only certified inspectors can inspect for asbestos.



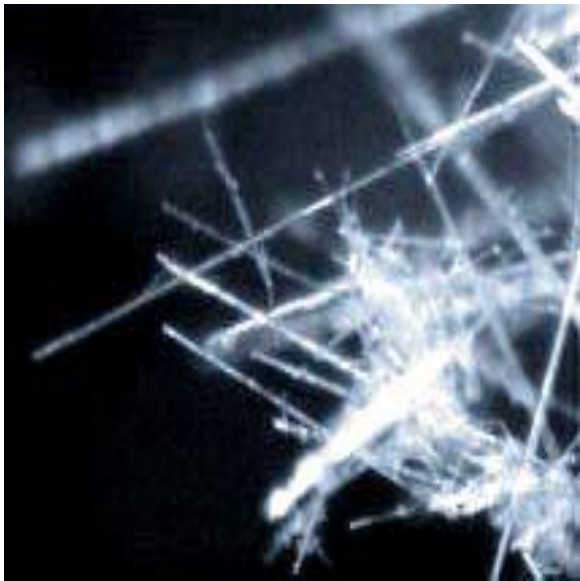


PHYSICAL CHARACTERISTICS

- **SERPENTINE FIBERS**:
  - **CHRYSOTILE** (white) = 95% construction products



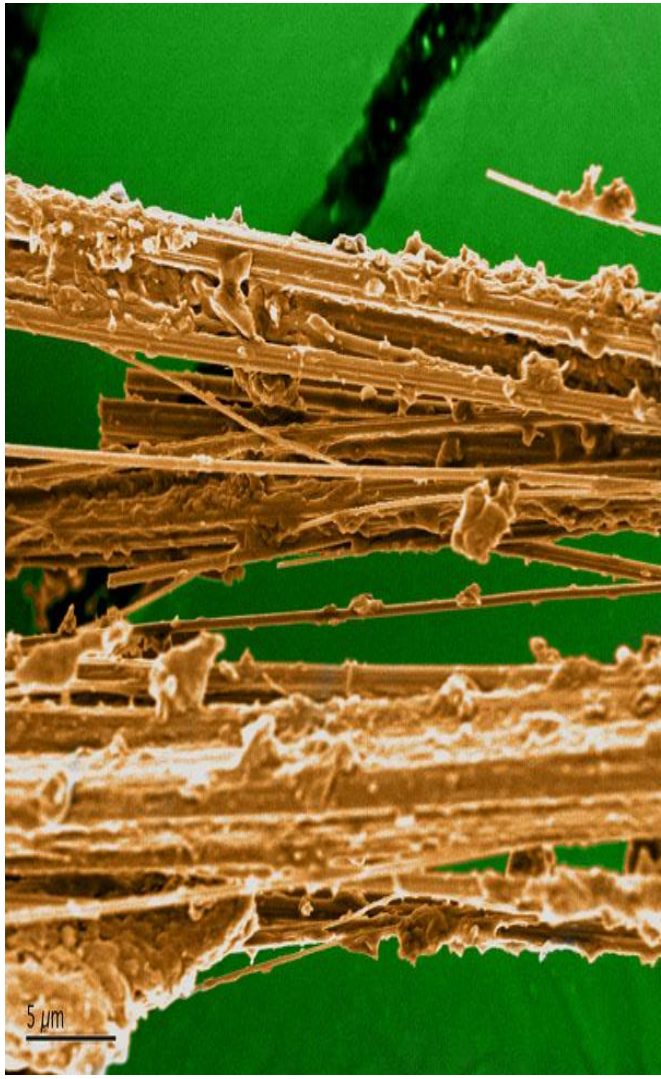
- AMPHIBOLE FIBERS:
- **CROCIDOLITE** (blue) = <2% of construction products
- **AMOSITE** (brown) = <3% of construction products



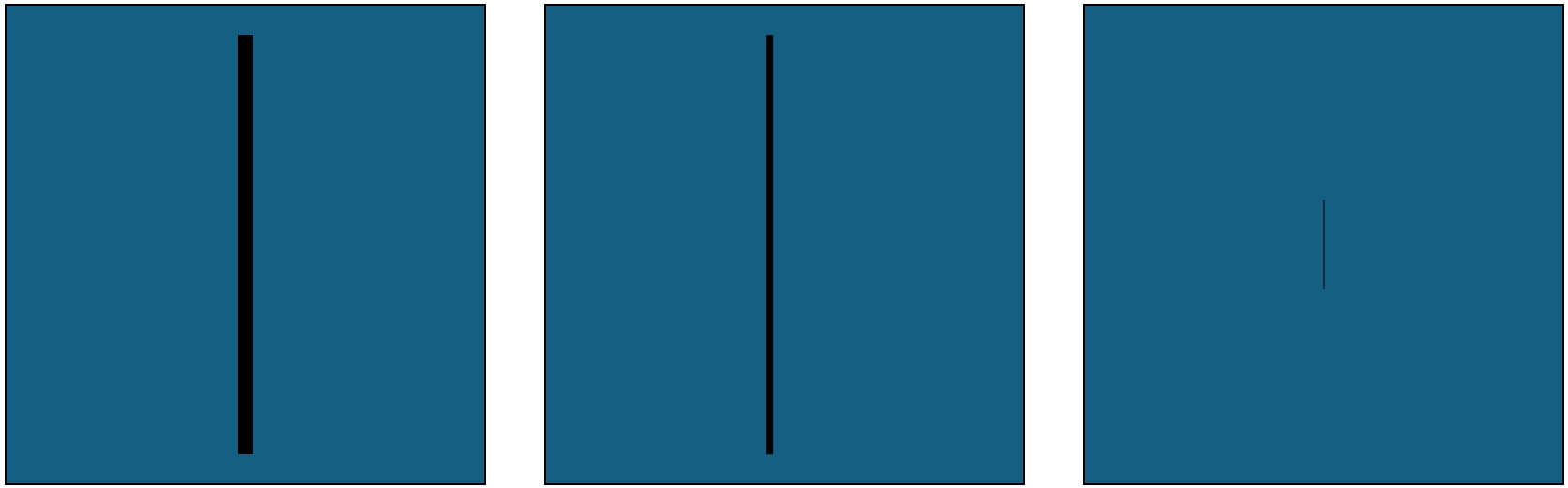
AERODYNAMIC CHARACTERISTICS

- **Microscopic fibers**
- **Invisible to the naked eye**
- **Asbestos fibers are measured in microns.**
- **They are usually 5 μm long or larger.**
- **3/1 Width/Length Aspect**
- **Fibers are suspended in the air for days**

μm = micrometer
(*millionths of a meter*)



VERY SMALL FIBERS



75 µm

Hair

5 µm

Fiberglass

0.5 µm

Asbestos

ACM

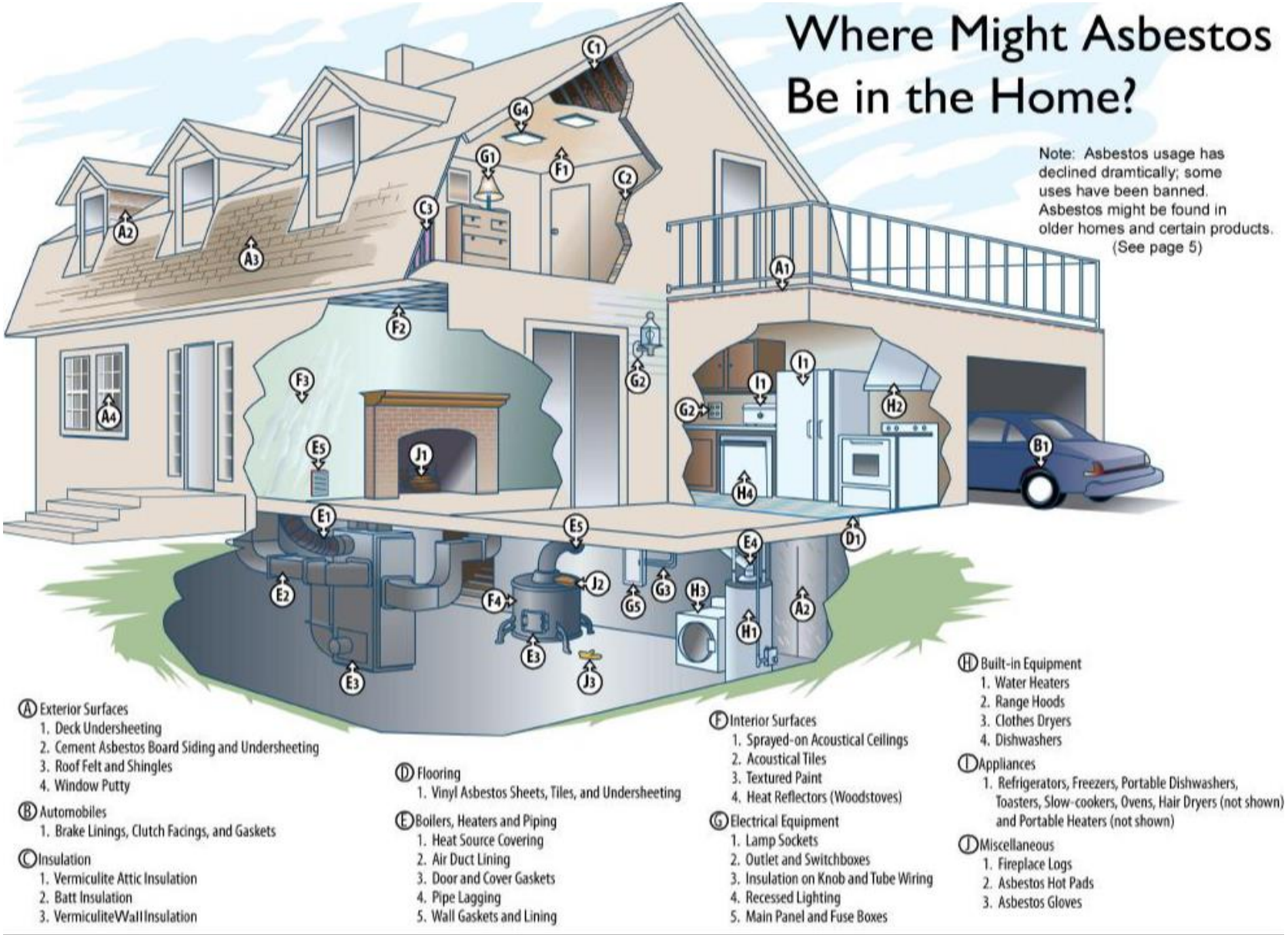
Courtesy University of Wisconsin, Milwaukee

- Materials containing >1% asbestos (greater than one percent).

ACM

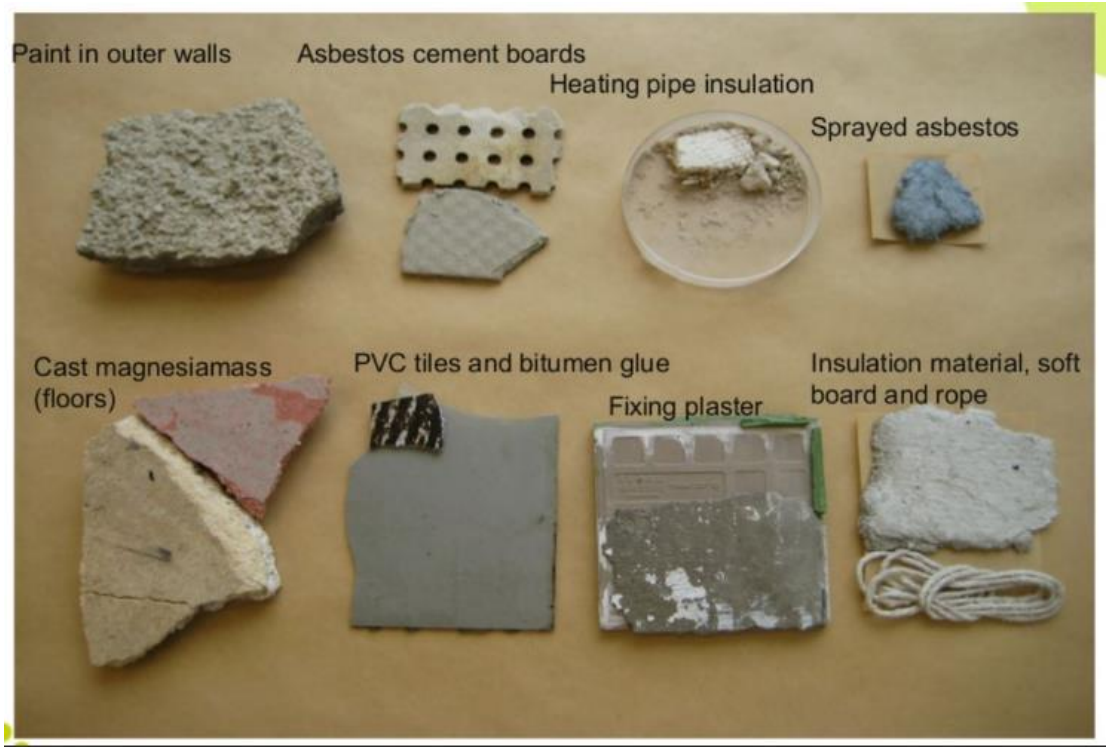
>1%

EXAMPLES OF ITS USE



ASBESTOS BUILDING MATERIALS

- Asbestos Cement
- Roof Tiles
- Ceiling Tiles
- Floor Tiles
- Loose Insulation
- Insulating Boards
- Textured Coatings
- Sprayed Coatings

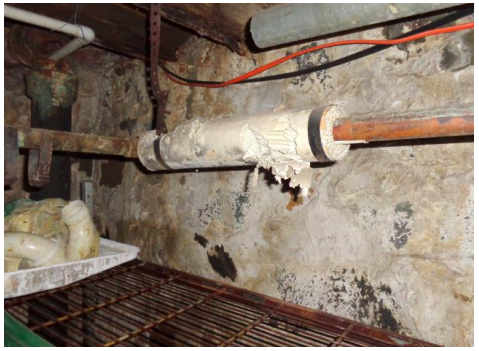


“FRIABLE” ASBESTOS

- ACM that can be **CRUMBLED OR REDUCED** to POWDER by hand in DRY.
- Includes damaged non-friable asbestos.

Source: OSHA Informer

Are these materials friable or non-friable?



WHEN IS IT DANGEROUS?

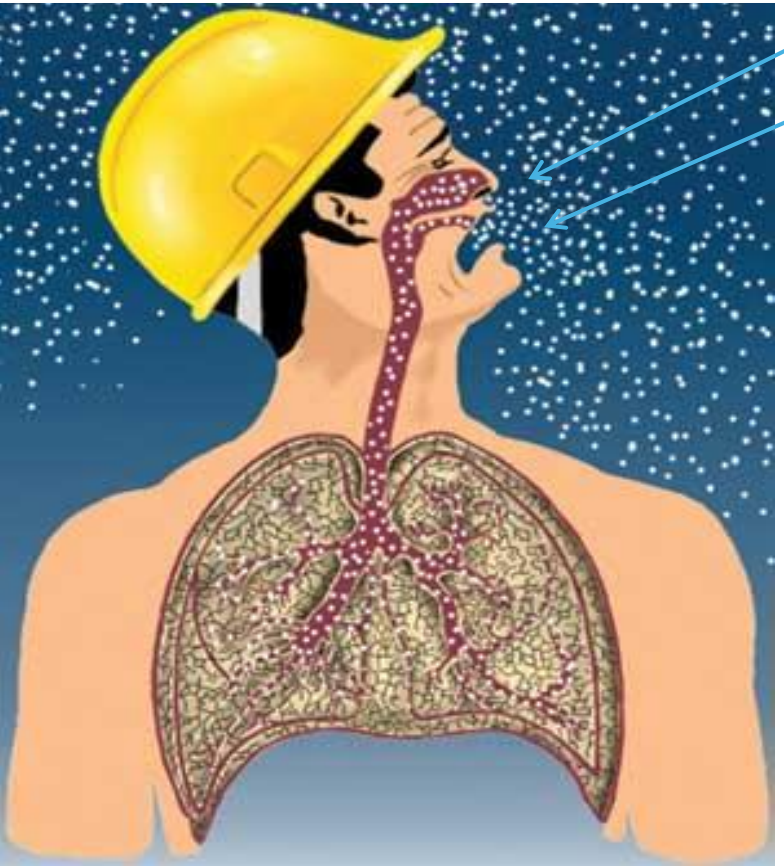
When it is in the air and can be breathed.

Hazard Considerations

Asbestos is not always hazardous unless it is disturbed or is FRIABLE.

This is an example of FRIABLE asbestos.

HEALTH EFFECTS



- **Exposure Routes**:
  - Inhalation
  - Ingestion

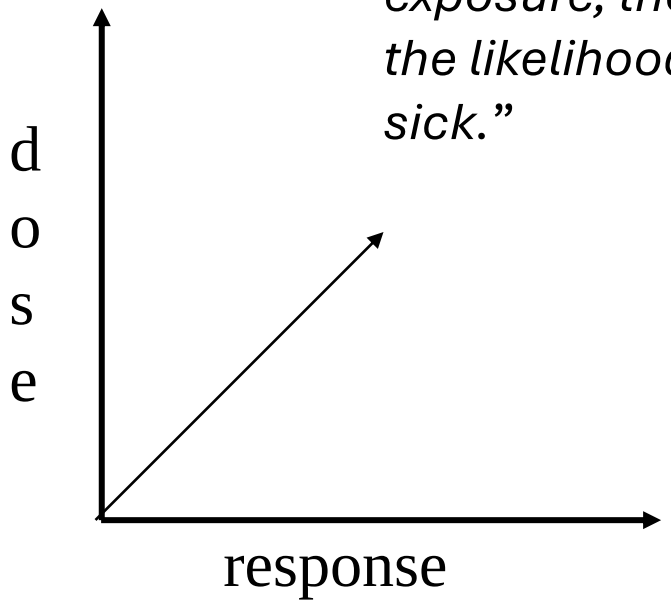
While it is also important to note that **MESOTHELIOMA** is not associated to a dose/response.

“There is No Safe Level to Asbestos Exposure”

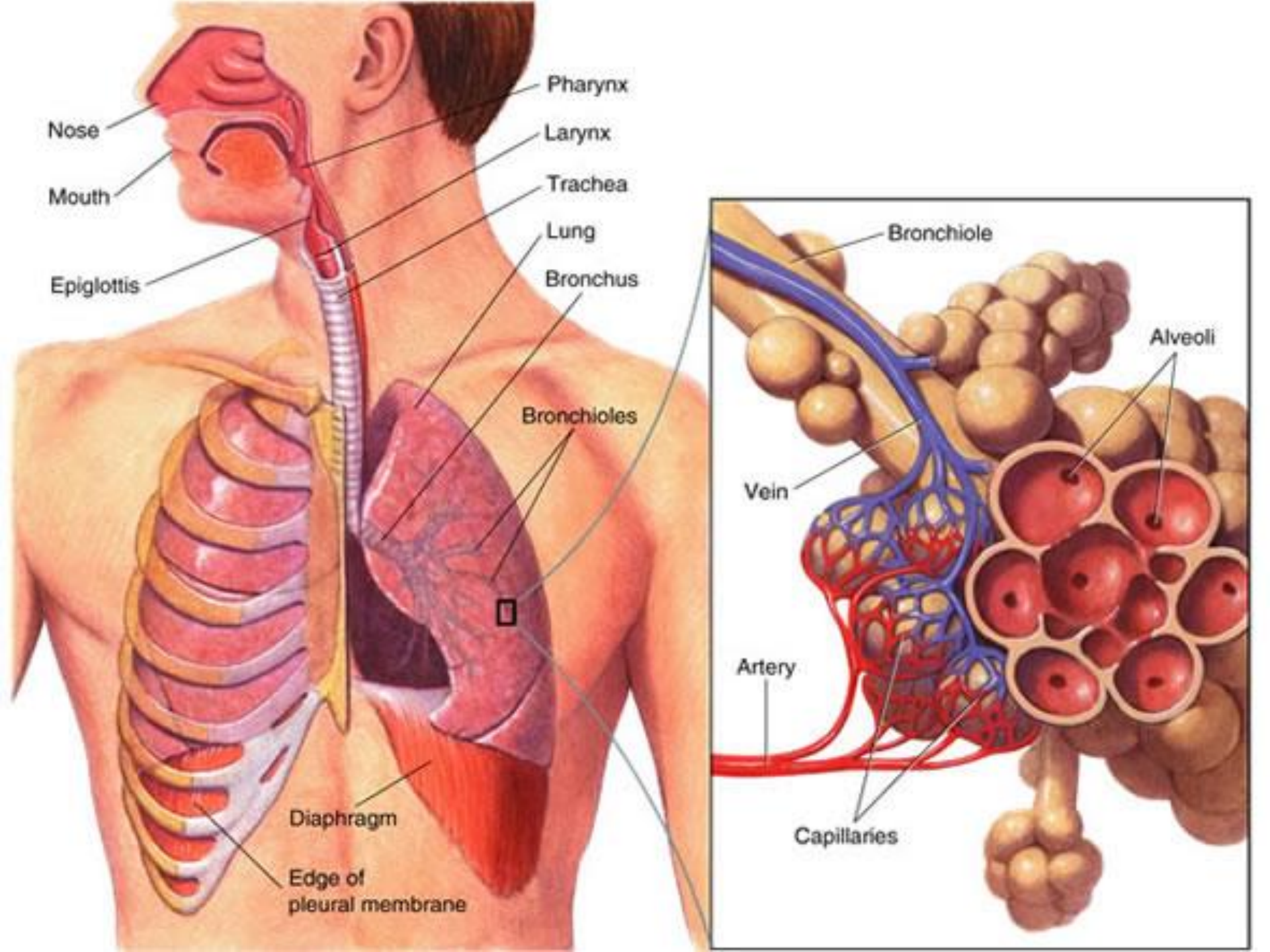
DOSE/RESPONSE

- Some asbestos-related diseases (asbestosis) DO have a dose/response relationship.
- Here is one disease (mesothelioma) that has NO dose/response relationship.

This graph shows that "*the greater the exposure, the greater the likelihood of getting sick.*"



Remember
There is
NO SAFE
level to asbestos
exposure!


Nose
Mouth
Epiglottis
Pharynx
Larynx
Trachea
Lung
Bronchus
Bronchioles
Diaphragm
Edge of
pleural membrane
Bronchiole
Alveoli
Vein
Artery
Capillaries

BODY DEFENSE

Cilia

Thin hairs found in the trachea.

They help expel contamination through sneezing.

Smoking numbs the cilia, which affects the process of clearing the airways.

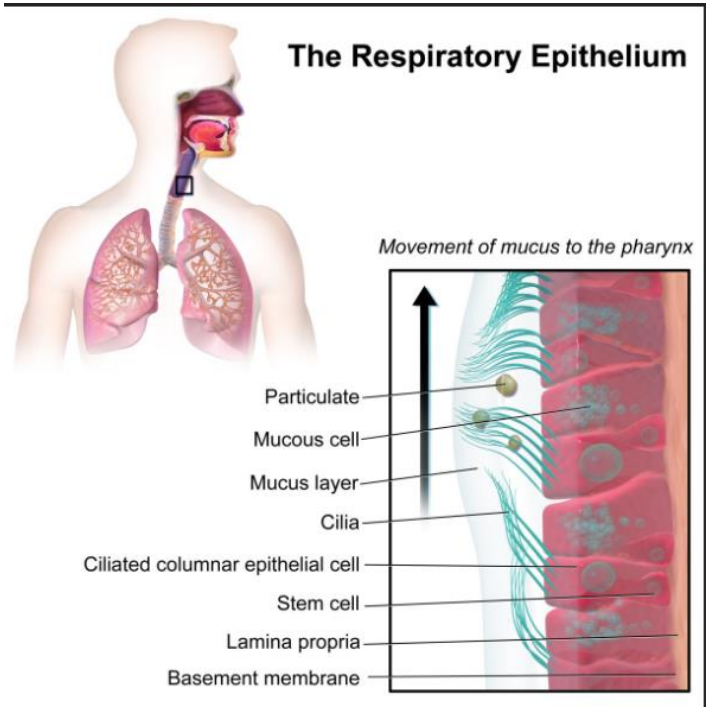
Mucosa

It helps stick particles to the trachea and then expel them.

One swallows 2/3 of the mucus daily.

White Blood Cells

They help cleanse the blood.



LATENCY

LATENCY PERIOD:

- The length of time it takes from exposure to asbestos to the onset of a disease (10 – 40 years).
- It is estimated that from 1940 to 1980, 27 million Americans had significant exposure to asbestos at work.

  - **THERE IS "NO SAFE LEVEL OF EXPOSURE" - EPA 1989**

Source: The Asbestos Informer - Provided by EPA

HEALTH EFFECTS

LUNG CANCER

Abnormal growth of tumors in the lungs

Leading Cause of Death in Workers (Smoking Increases Risk)

Dose-related

MESOTHELIOMA

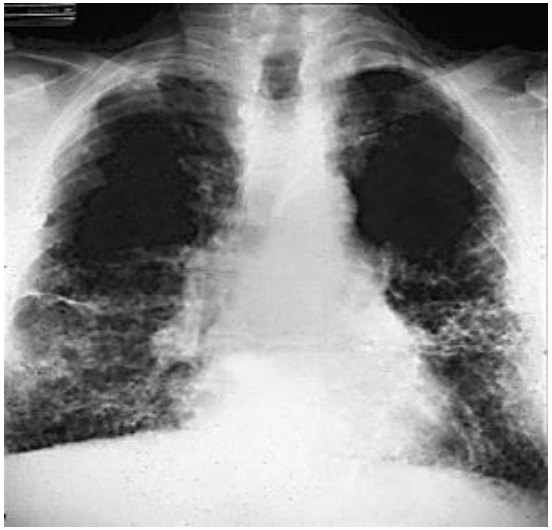
Cancer in the lining of the lungs or abdomen Not dose-related

ASBESTOSIS

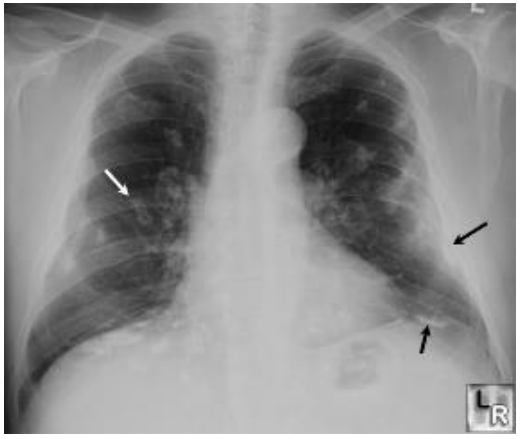
Scarring of lung tissue

DIGESTIVE CANCER

Tumors in stomach, intestines or rectum



PHOTOS OF DISEASE X-RAYS



Facts About Asbestosis

- There is no effective treatment,
- It almost always disables or causes death.
- The risk to people who do not work with asbestos is minimal,
- Rarely caused by family or community exposure,
- Those who work in construction are more likely to do so.

Source: U.S. EPA – The Asbestos Informer.

SYMPTOMS & TREATMENTS

DISEASE	SYMPTOMS	TREATMENT
ASBESTOSIS	Shortness of breath, shortness of breath	There is no cure Antibiotics for colds
LUNG CANCER	Pain under the ribs Strong cough	Transplant Chemotherapy
MESOTHELIOMA	Many times there are no symptoms	There is no cure. Chemotherapy
PLEURAL PLAQUES	Shortness of breath	There is no cure Antibiotics for colds
OTHER TYPES OF CANCER	Abdominal, stomach, bowel, or rectal pain	90% chance of cure if there is early detection

PERSONS WHO DIES FROM ASBESTOS-RELATED DISEASES

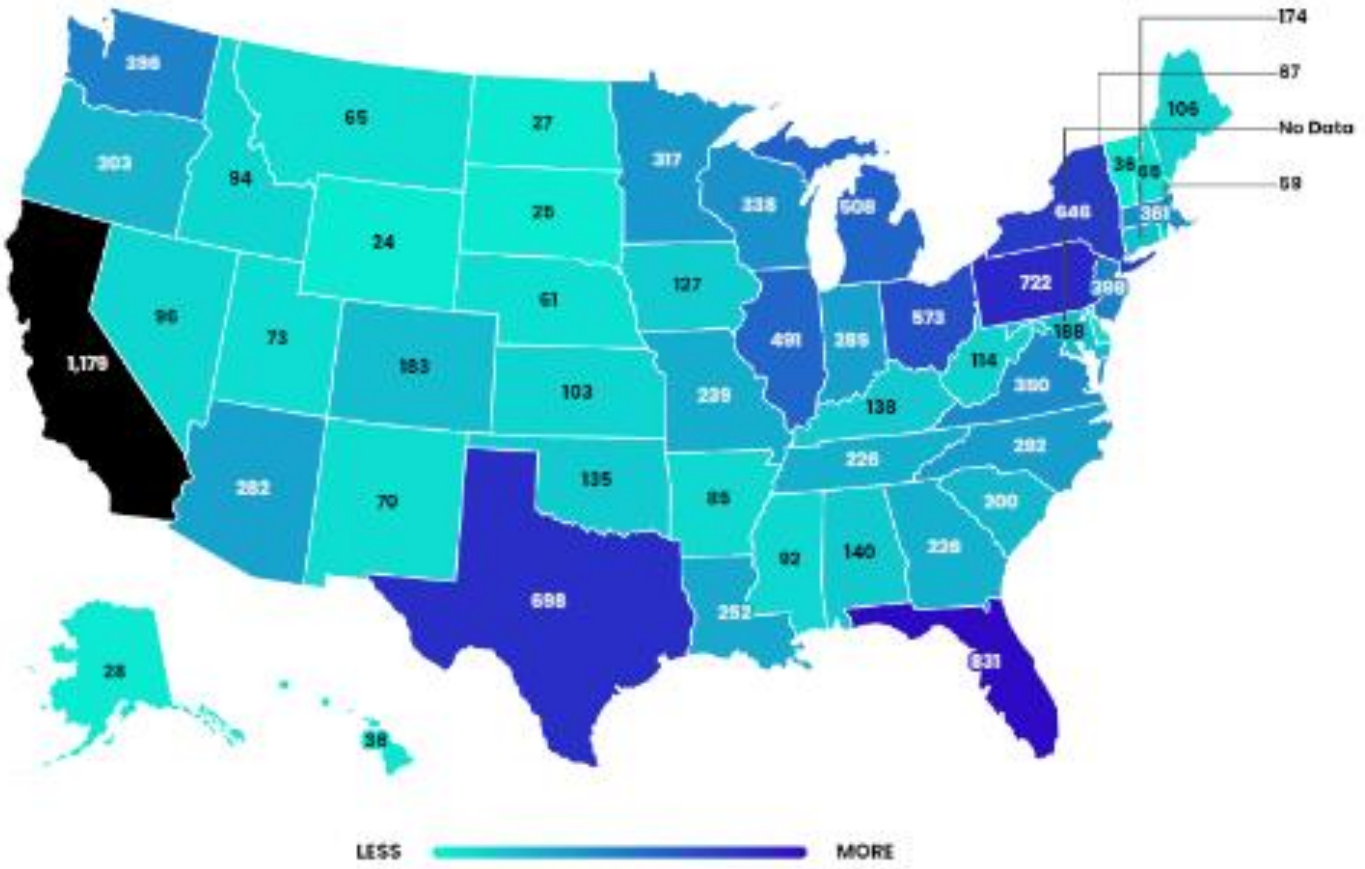
Steve McQueen

- **He died of m**esothelioma
- **McQueen recalled stripping asbestos off pipes in a ship's engine room** during his stint as a U.S. Marine.
- The actor also worked around sound stage insulation and wore fireproof racing suits that likely contained asbestos.

Priest Richard Pankowsky

- He died at the age of 35
- His father brought asbestos home and later died of asbestosis
- His mother died of mesothelioma

Number of Mesothelioma Deaths (2015-2019)

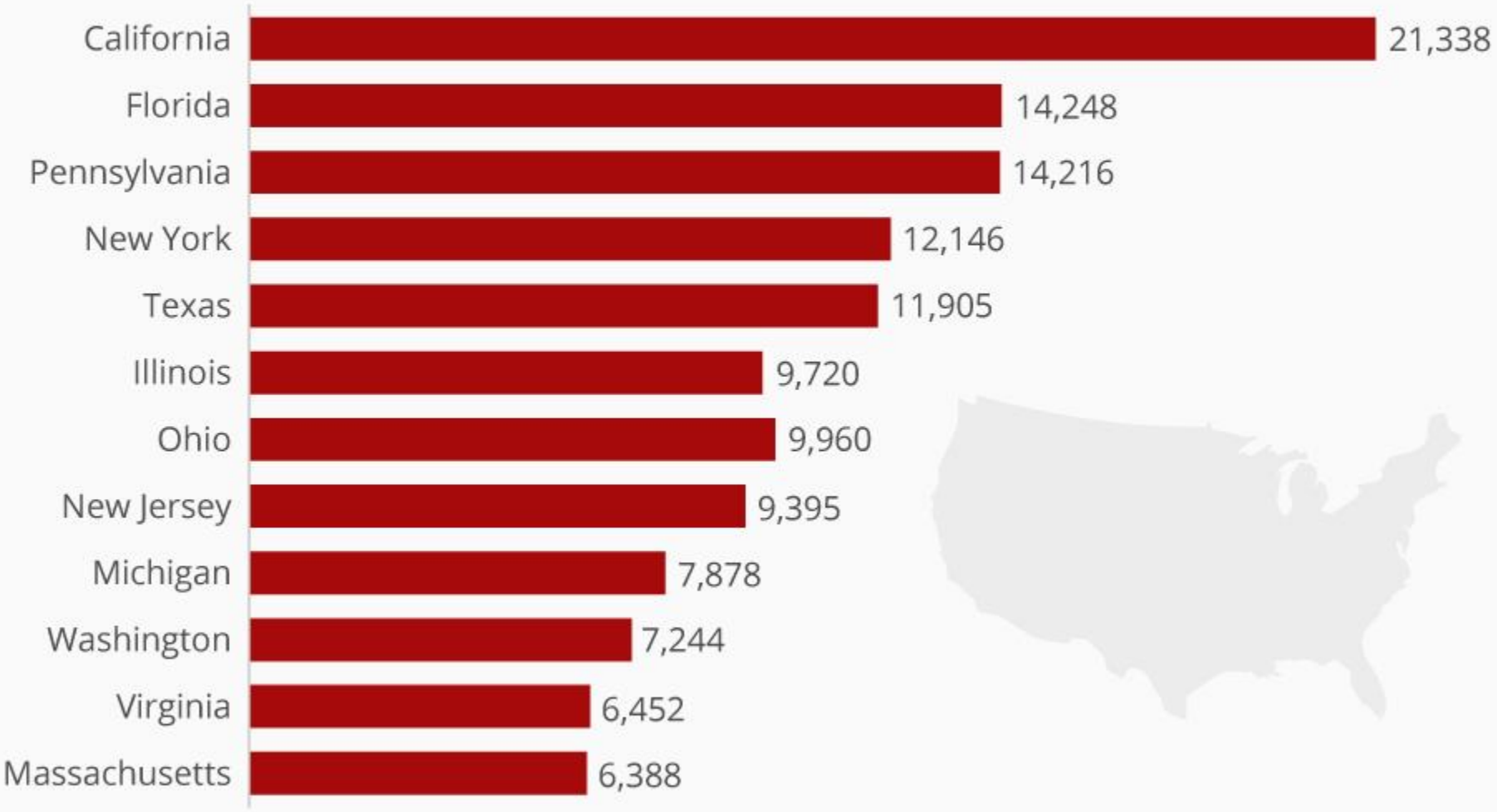


1POINT21

Source: CDC

Where Asbestos Has Inflicted The Deadliest Toll

States with the most asbestos-related deaths from 1999 to 2013

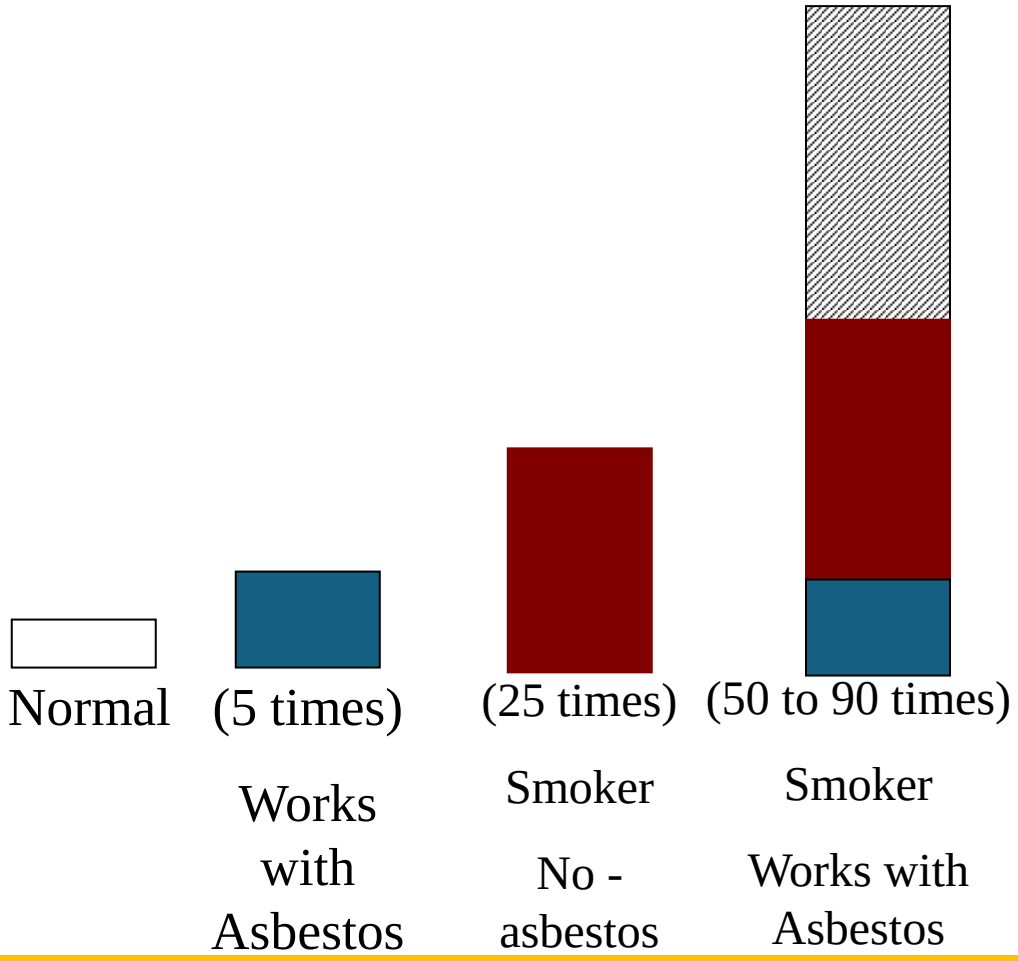


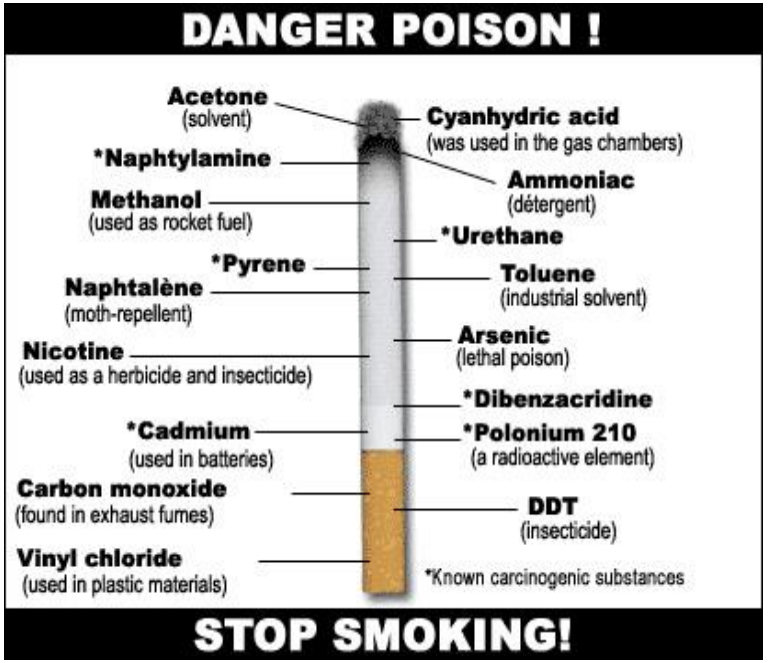
Source: EWG Action Fund via Asbestos Nation

WHAT DO YOU THINK ABOUT THESE WORKERS?

SMOKING AND WORKING WITH ASBESTOS

Smoking increases the risk of lung cancer by 50 to 90 times.





Cigarettes contain more than 4000 chemicals; 69 of them carcinogenic.

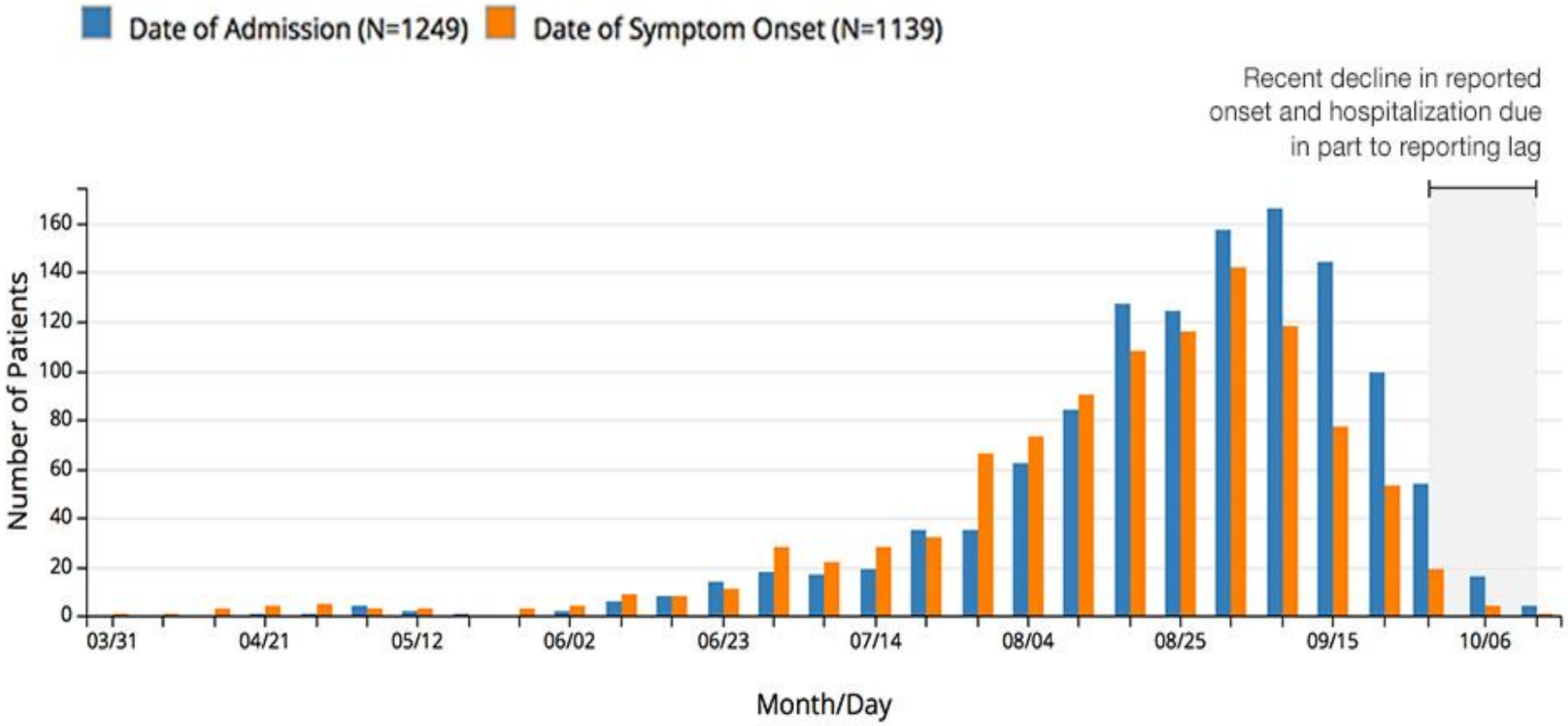
VAPING IS ALSO DANGEROUS

Here are the dangers associated with vaping:

- No matter the delivery method, nicotine is addictive. Studies have shown that it may be harder to quit a nicotine addiction than a heroin addiction.
- The flavors and stabilizers in e-cigarettes can cause unknown inflammation to delicate lung tissue.
- The length of time spent vaping can be much longer than smoking a standard cigarette.

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Dates of symptom onset and hospital admission for patients with lung injury associated with e-cigarette use, or vaping — United States, March 31–October 19, 2019



OTHER TYPES OF CANCER

- Medical evidence suggests that ingesting asbestos can cause cancer in:
  - Esophagus
  - Larynx
  - Mouth
  - Stomach
  - Colon
  - Kidneys

MEDICAL EXAMINATIONS
OSHA 29 CFR 1926.1101 (M)

OSHA Says:

- **The employer must perform medical monitoring when its employees go to work at levels >0.1 f/cc 8 hours on average, for more than 30 days per year.**
- You will be using negative pressure respirators.

REQUIRED ANNUALLY

- Medical Questionnaire
- Work history
- Smoking history
- General Physical Exam
- Pulmonary function (spirometry)
- Chest x-ray

Chest X-Ray Frequency

OSHA Recommended Frequency.

YEARS OF WORK ON ASBESTOS	CURRENT AGE 18 TO 35 YEARS OLD	CURRENT AGE 36 TO 45 YEARS	CURRENT AGE OVER 45 YEARS
FROM 0 TO 10	EVERY 5 YEARS	EVERY 5 YEARS	EVERY 5 YEARS
MORE THAN 10	EVERY 5 YEARS	EVERY 2 YEARS	ANNUAL

IMPORTANT POINTS

OSHA requires employers to keep worker medical records:

The employer must keep medical examination records during the workers' employment and for an additional 30 years.

WHEN YOU STOP WORKING WITH ASBESTOS

It is recommended to continue an annual medical follow-up.

RESPONSE ACTIONS - CONTROL METHODS

Removal:

- Removing asbestos.

Encapsulation:

- Sealing asbestos in place.

Enclosure:

- Enclosing Asbestos in Place.

Repair:

- Fixing Damaged Asbestos.

O and M (Operation & Maintenance):

- Regular monitoring and cleaning.

RESPONSE ACTIONS IN ACTION

Spayed-on asbestos removal.

Exterior siding removal

REMOVAL

Removal requires a proper work area setup prior to disturbing asbestos.

DOs

- ❑Pre-clean the work area
- ❑Setup containment barriers prior to removal
- ❑Provide negative air pressure and air filtration
- ❑Keep asbestos wet
- ❑Repair containment immediately if breaches are noticed

DONT's

- ❑NEVER dry sweep
- ❑Don't let asbestos buildup
- ❑Don't use water when temperature is <32^{o}

Note: Special permission is required before dry removal takes place.

Typical Materials used for Job Setup

Containment: Cut down the risk of contamination by carefully preparing a containment area. Search in products for the containment supplies you will need to complete your job.

Poly sheeting- 4mil/6mil Widths available 8', 10',12' and 20'

Containment poles, available in 10', 12' and 20' lengths

Containment Tape, vinyl Tape and Spray Adhesive

Poly Hangers

Negative Air Machine

Stage I, Stage II and HEPA Filters

Flex Duct and Lay Flat Tubing

Signage and Barrier Guards

- Filter the air
- HEPA = 99.97% fibers >0.3 microns in diameter
- NAM = 4 air/hour changes
- **KEEP NAM's working passing clearance**

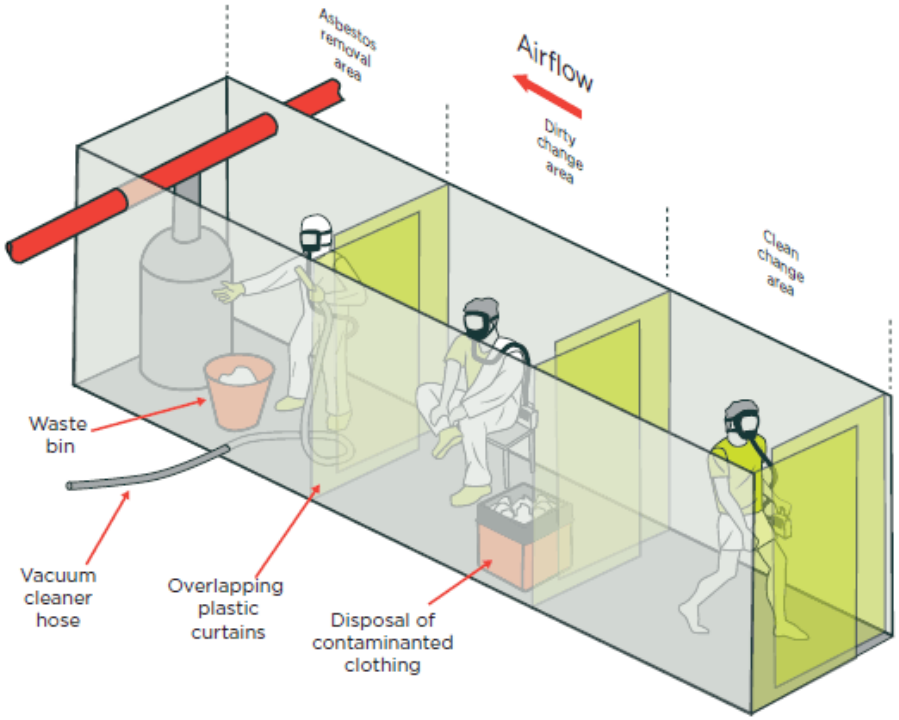
ENCAPSULATION

ENCLOSURE

- Enclosing Asbestos
- Must be airtight

REPAIR

- Apply bridging encapsulation
- Ensure no leaks remain



OPERATION AND MAINTENANCE

- This method is used by maintenance personnel
- workers need to be trained

Glovebag Directional Step-By-Step Instructions

ILC DOVER creating what's next | Grayling environmental safety products

Standard Glovebag Process for Avail Extended-Run glovebags.

Equipment and Supplies Checklist:

1. Avail EXT glovebags
2. Grayling D-Con shower system
3. Disposable coveralls
4. Boot covers
5. Work gloves
6. Hard hat
7. Eye protection
8. HEPA filtered respirator
9. Barricade tape and warning signs
10. Duct tape
11. Smoke test kit
12. Surfactant / wetting agent
13. Encapsulant
14. Pump-up garden type of sprayer
15. HEPA filtered vacuum cleaner
16. 6mil polyethylene drop cloth
17. Asbestos disposal bags
18. Personnel air sampling pumps and cassettes
19. Tools – tin snips, pliers, flexi-saws, box cutters, brushes, scrub pads, etc.

Preparation:

1. Shut off the HVAC system, or ventilation fans in the work area and tag and lockout access to control panels.
2. Mark off the regulated area with barricade tape, leaving a wide margin around the abatement area.
3. Post asbestos-warning signs prominently.
4. Erect the D-Con facility adjacent to the regulated area.
5. If there are doors or windows accessing the regulated area, set up critical barriers.
6. Don your personal protective gear, beginning with the coveralls.
7. Roll out the polyethylene sheeting and position an adequate length under the pipe as a drop cloth.

Carfully vacuum the pipe with a HEPA filtered vacuum cleaner to remove any asbestos dust.

If the insulation is friable, wrap the pipe with a layer of polyethylene sheeting with duct tape in a "candy-stripe" pattern.

Determine the number of glovebags required for the project and place the necessary tools in the tool pouch.

Lift the opened bags to the pipe and tack in place with small strips of duct tape. Beginning with the first chamber, seal the bags from one end to the other with duct tape.

Return to the start of the run. Gather the open collar of the glovebag around the pipe and seal it tightly to the pipe with the duct tape. Repeat the procedure at the far end of the glovebag.

Insert the HEPA vacuum and the the pump sprayer wand through the entry ports. Seal each to the entry port socks with duct tape.

Perform a smoke test on each chamber prior to commencing insulation removal. Seal any leaks detected with duct tape.

Generously wet the insulation with surfactant. Put your hands and arms into the first glove/sleeve assembly and, using the tools in the tool pouch, begin removal of the jacketing and insulation.

Remove the insulation from the pipe and lower it to the bottom of the debris area of the bag. Be sure to remove the insulation that extends into the collars of the bag.

Clean the pipe as far as possible between chambers in the collar area. Once the insulation has been removed, scrub the pipe clean using a brush and surfactant.

Tightly cinch the collar up around the cleaned section of pipe going into the next chamber using duct tape or a strap. Activate the HEPA vacuum to evacuate the air from the glovebag.

Twist off the debris chamber just below the glovesleeves and tightly wrap the twisted section with duct tape. Cut through the center of the duct taped area, separating the debris chamber from the work area.

Place the debris chamber into a properly marked asbestos disposal bag and move on to the next chamber and repeat the process.

Grasp the tools and pull the sleeve inside out with the tools inside. Twist the sleeve above the tools and wrap the twisted area securely with duct tape, then cut through the center of the taped area.

Remove all of the glovebag work area stubs remaining, starting at the collar, slitting the top of the stubs free while folding inward into an asbestos disposal bag.

Again, spray an encapsulant down the length of the bare pipe to "lock down" any residual fibers.

After the last chamber of the Extended-Run Glovebag has been taken down and safely disposed of, proceed with clean up and decontamination.

MKT-0180

ILC DOVER | Grayling
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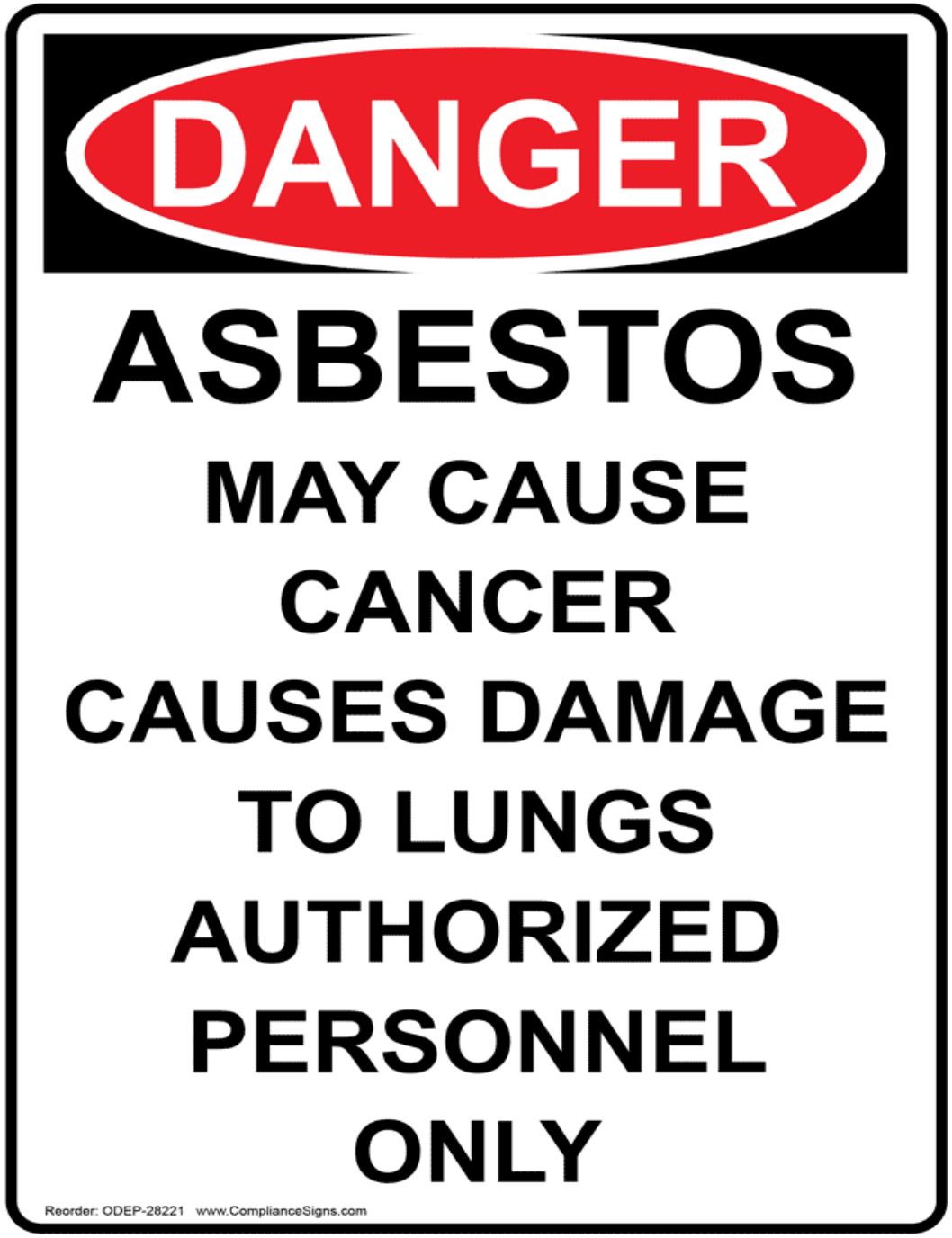
environmental safety products

www.ilcdover.com | customer_service@ilcdover.com | 770.751.9095 | 800.635.1551
ONE MOONWALKER RD, FREDERICA, DELAWARE USA 19946-2080

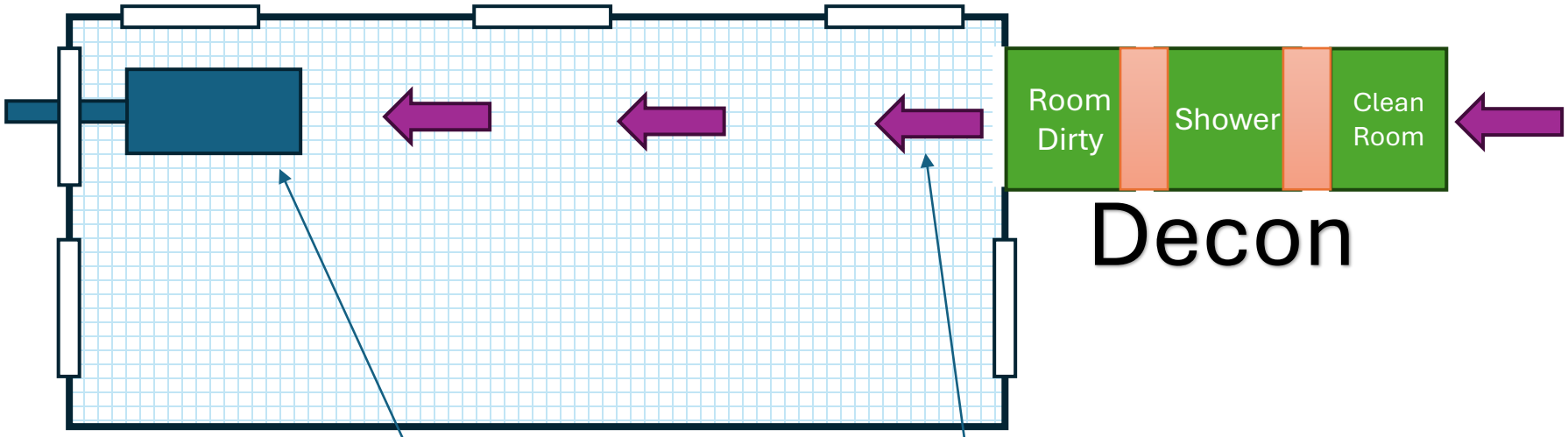


- Place caution signs at all entrances to the work area

SEAL CRITICAL BARRIERS

Critical Barriers and Splashguards

Typical “Containment” System



Negative Air Machine

Airflow

AREA PREPARATION

- Double Plastic on the Floor – 6mil
- Double Plastic on Walls – 4mil (6mil Indiana)
- Sealing Critical Barriers – 6Mil
- For joints, overlap the plastic a minimum of 6 feet
- Use painter's tape to prevent smudges and peeling off paint
- Use Rubber Spray for Plastic Joints

Attach the DECON unit

Filter water through 25 micron and 5 micron filters

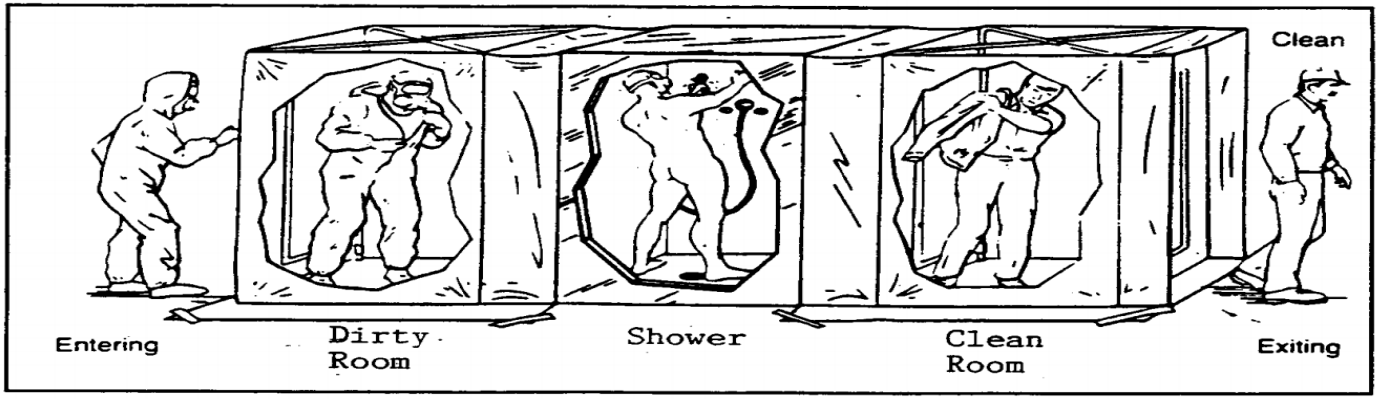
Do not dispose of the water without first filtering it

Place caution signs at the entrance

OSHA requires DECON >25 lf or 10 sf

Hot and cold water

Clean DECON at the end of each use.

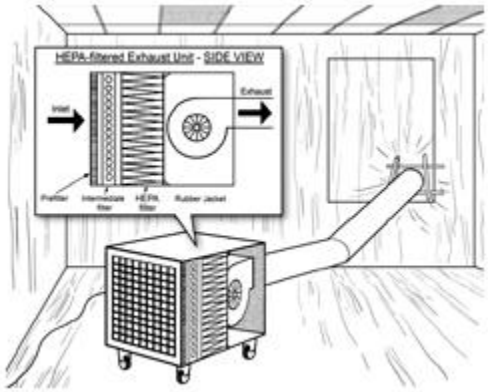


Review of Steps for Effective Decontamination:

Step 1. Vacuum your overall before entering the dirty room
Step 2. Enter the dirty room and remove all PPE (not including respirator)
Step 3. Get in the shower and shower
Step 4. Shower thoroughly using shampoo or soap (with warm water)
Step 5. Remove your respirator and dispose of filters
Step 6. Rinse your respirator
Step 7. Enter the cleanroom and dry your body
Step 8. Dress in clean clothes and go outside

Video

TYPICAL ENCLOSURE



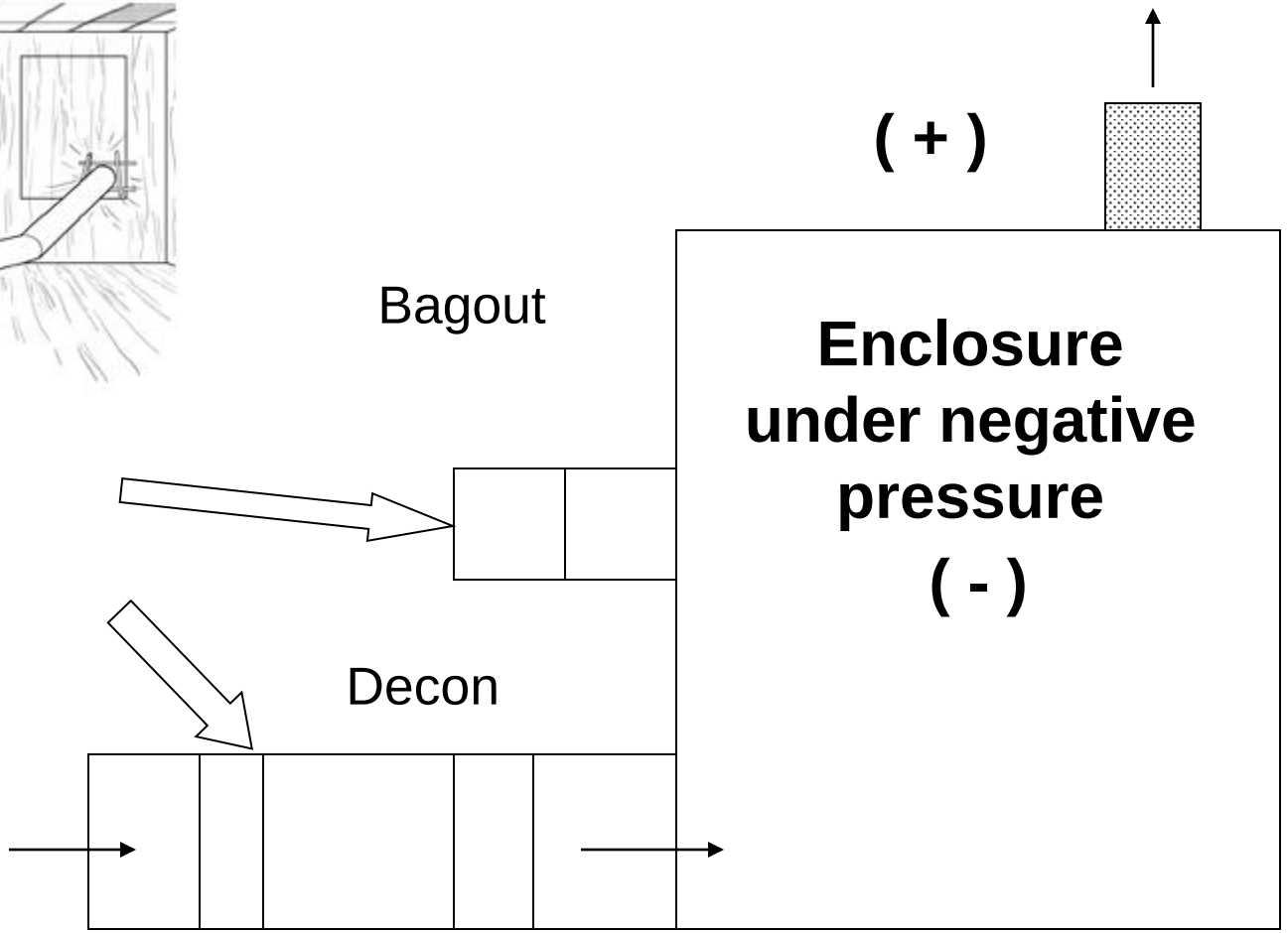
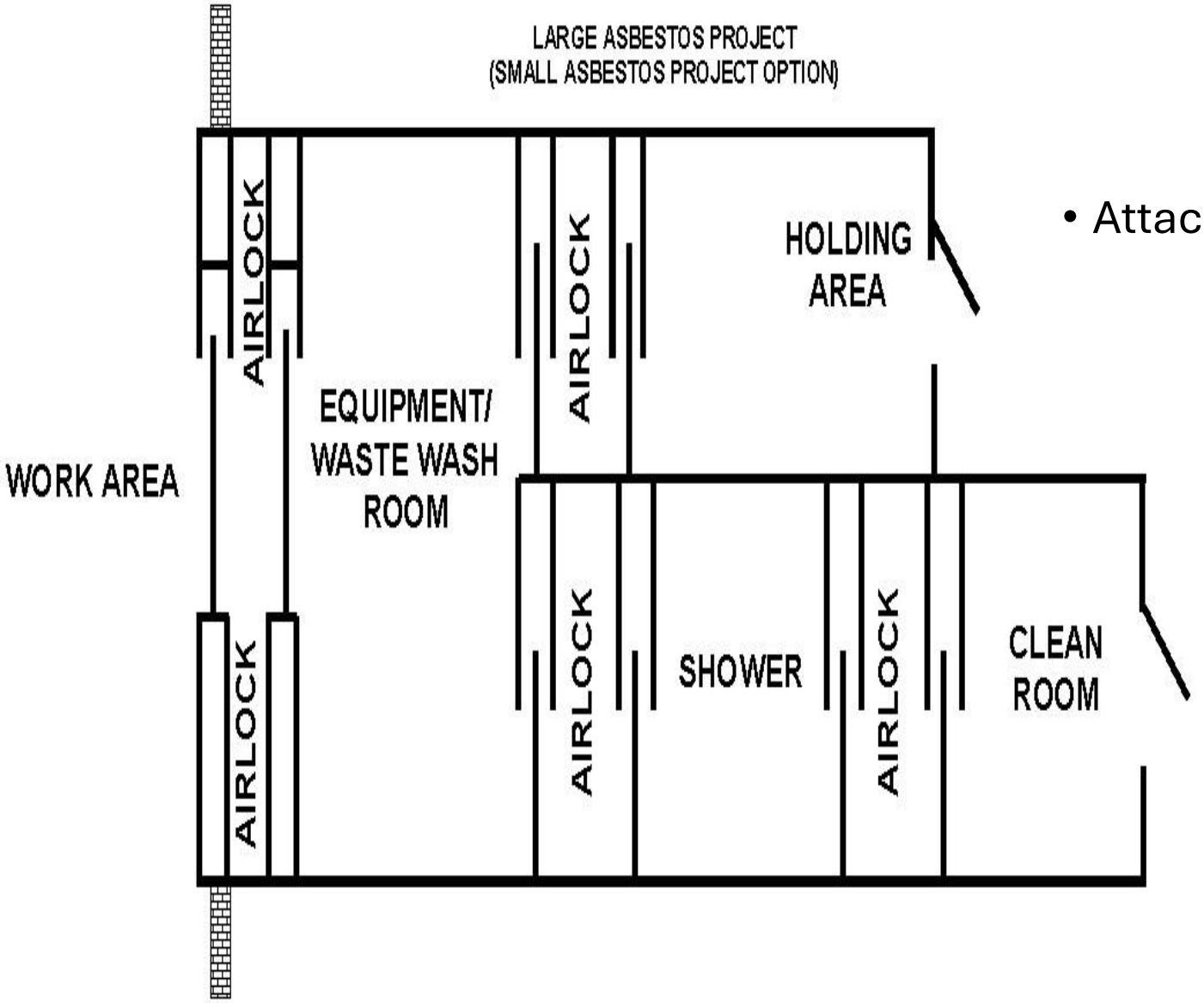


Figure 4

PARALLEL PERSONAL AND WASTE
DECONTAMINATION ENCLOSURE SYSTEMS

LARGE ASBESTOS PROJECT
(SMALL ASBESTOS PROJECT OPTION)



- Attach the BAGOUT unit

Place waste in sealed boxes

- Danger sign on the door
- Keep under lock and key

Double Bag Asbestos

- Second bag bears hazard label and originator's name
- Wash the second bag
- Apply gooseneck and “adequately wet"

Transport in enclosed trucks

Go to the disposal site directly

The bed of the truck must be lined with plastic on the inside

DOT Requires Special Transportation License

NAM

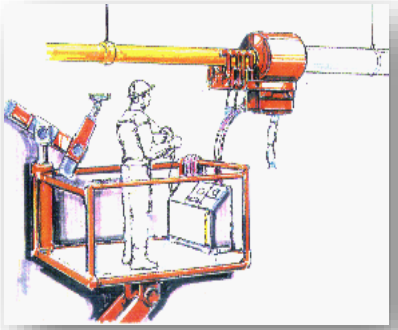
4 air changes per hour.

Recommended filter change:

FILTER	**FREQUENCY**
PRIMARY >**25 microns**	Every **2 hours**, or as needed.
SECONDARY >**5 microns**	Every **24 hours**, or as needed.
HEPA >**0.3 microns**	Every **500 working hours**, or as needed.

NEW WORK TECHNOLOGIES AND PRODUCTS

NEW WORK TECHNOLOGIES & PRODUCTS



ASBESTOS ROBOT

(BOA System)

INYECCION "Asbestrip"

GLOVE BAG "Quick Twist"

"Sticky Poly

FOAM "Experimental Method EPA

RESPIRATORY PROTECTION

29 CFR 1910.134

Respiratory Protection Regulations

REQUIREMENTS

MEDICAL APPROVAL

- ❑Questionnaire
- ❑Routine Physical Exam
- ❑PFT (Pulmonary Function Test)
- ❑X-ray chest

TRAINING IN THE USE OF RESPIRATORS

- ❑Use, Maintenance, and Limitations
- ❑Respiratory fit tests and seal checks
- ❑Annual medical exams
- ❑New fit tests are required any time you employees lose or
- ❑ gain 20 lbs or more
- ❑Each time a different respirator is assigned to the employee

LIMITATIONS OF RESPIRATORY EQUIPMENT

1. Facial hair
2. Mask size
3. Filters
4. Changes in the user's face
5. Cleaning and disinfection
6. Protection Limits
7. Use according to the type of work

TYPES OF RESPIRATORS

- APRs = Air Purifiers
  - Positive Pressure(+)
  - Negative Pressure(-)

- SARs = Air Suppliers
  - Positive Pressure(+)

HALF FACE

Used in low-dust work

Doesn't cover the eyes

Legal up to **1 f/cc**

FULL FACE

Used in medium-dust work

They fog up

Legal up to **5 f/cc**

PAPR

- Used in high-dust jobs
- Required when removing friable ACM
- Legal up to **100 f/cc**

DO NOT USE

in spaces where there is

Oxygen Deficiency

<19.5% O_2

TYPE “C”

- Use a separate air source from the work air
- Requires specialized installation
- Maximum line length = 300 feet
- Maximum Air Pressure = 125 psi
- Legal up to 100 f/cc

SCBA

- Used in rescue and emergency work
- Requires specialized training
- Legal up to 1000 f/cc

These respirators

CAN BE USED

in places where there is

Oxygen Deficiency.

What are the Exposure Limits?

PEL = 0.1 f/cc in 8 hours TWA

STEL = 1 f/cc in 30 minutes

- How many fibers is 0.1 f/cc at the end of the day?
- What happens if I work more than 8 hours?

PEL

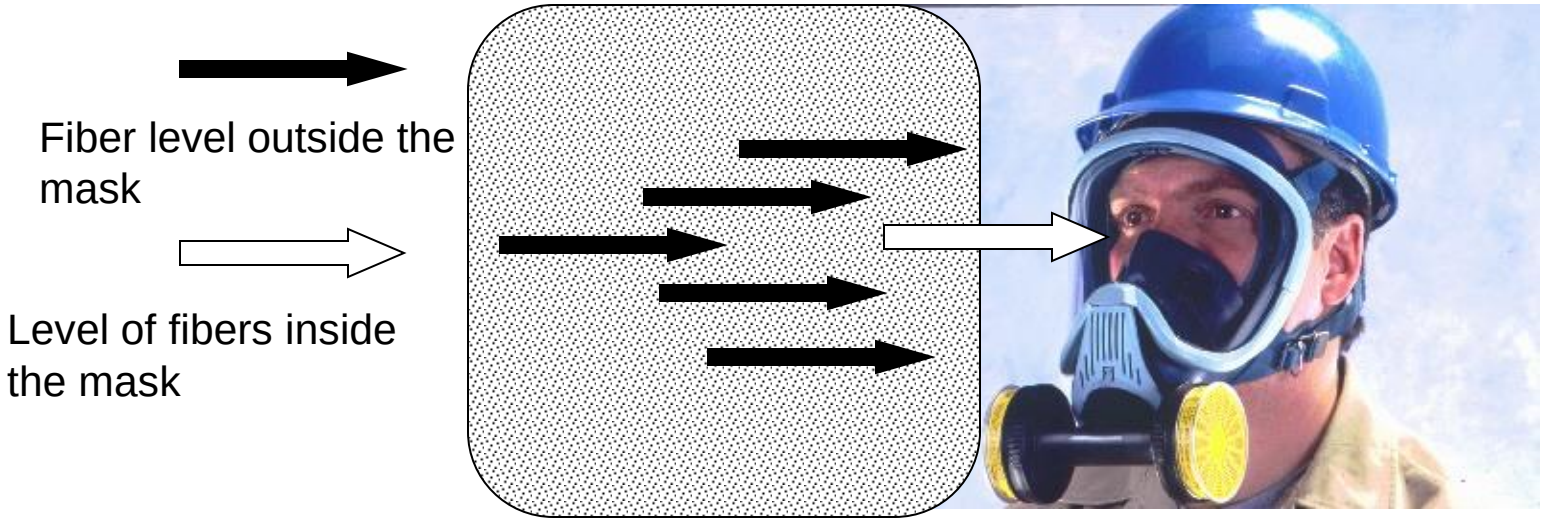
Allowed to breathe this level in an 8-hour period.

A worker breathes 1 cubic meter of air per hour

at the level of 0.1 f/cc

The worker will breathe approximately 800,000 fibers.

PROTECTIVE FACTOR



Comparison of the number of fibers outside the mask in relation to the fibers inside the mask. Ex:

Half Face = 10 outside/1 inside.

So, the PF is = 10

MUL
MAXIMUM USE LIMIT

Maximum number of fibers that a respirator can protect me.

RESPIRATOR	PF	MUL
Half Face	10	1 f/cc
Full Face	50	5 f/cc
PAPR	1000	100 f/cc
Type "C" Continuous Mode	100	10 f/cc
Type "C" Demand Mode	1000	100 f/cc
SCBA	10000	1000 f/cc

MUC
Maximum Use Concentration

MUC = 0.01 f/cc X FP

Example: For a Half Face Mask, the MUL is:

0.1 f/cc X 10 f = 1 f/cc

RESPIRATOR	FACTOR	x	PEL	CUM
Half Face	10	x	0.01 f/cc	0.1 f/cc
Full Face	50	x	0.01 f/cc	0.5 f/cc
PAPR	100	x	0.01 f/cc	1 f/cc
Type “C” Continuous	100	x	0.01 f/cc	1 f/cc
Type “C” Demand	1000	x	0.01 f/cc	10 f/cc
SCBA	10000	x	0.01 f/cc	100 f/cc

EXPOSURE LIMITS

PEL (permissible Exposure Limit) =

0.1 f/cc (in 8 hours TWA)

STEL (Short-Term Exposure Limit)

1 f/cc (in 30 min.)

Note: TWA is an Average Time Measurement in an average of 8 hours.

RESPIRATORY HAZARDS

Dusts and vapors:

- Asbestos
- Lead dust

Vapors and Odors:

- Rubber Removers
- Rubber Spray

Oxygen Deficiency:

- Enclosed or Confined Places

HOW TO MANAGE RESPIRATORY RISKS

ADMINISTRATIVE:

- Training, Written Programs, SOP

ENGINEERING & CONTROL & SAFE WORK PRACTICES:

- Put plans into action, Use good work practices, physical systems (NAM, wet asbestos, barriers)

PPE:

- Proper Use of Respirators

REMEMBER

DO NOT USE Air Purifying Respirators

in places

Less than 19.5% O2

Do not use APRs in IDLH

(*immediately dangerous to your life and health*) environments

Oxygen Deficiency

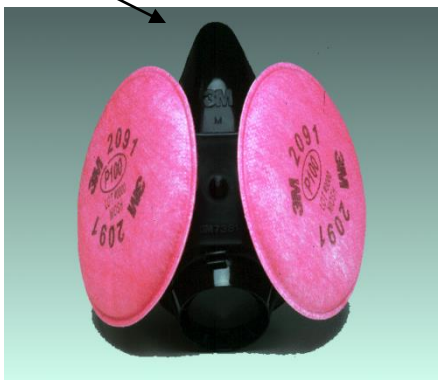
<19.5% de O2

FILTER CLASSES

- N-95 (grey) - The Dust Mask.

- P-100 (Magenta, pink).

HEPA filters filter 99.97% ~~of~~ particles from the air down to fibers as small as 0.3 microns in diameter.



- Combo Filters.

Comfo Respirator Cartridges

The Comfo line of particulate, chemical and combination cartridges is NIOSH-certified (to 42 CFR, Part 84). Cartridges fit Comfo Classic, Ultra-Twin, Ultra Elite Twin-Cartridge and Duo-Twin Respirators, and certain half-mask and full-face Advantage Respirators with Adapter (P/N 809999).

			Acid Gases												Filter Type & Efficiency See **Definitions** on previous page			
MSA Cartridge Description	**Re-Order Part Number**	**Color Coding**	Organic Vapor OV	Chlorine CL	Sulfur Dioxide SD	Chlorine Dioxide CD	Hydrogen Chloride HC	Hydrogen Sulfide HS	Ammonia AM	Methylamine MA	Formaldehyde FM	Hydrogen Fluoride HF	Mercury Vapor MV	P100	R95	N95	See **Notes** on p. 12
Organic Vapor (GMA)	464031 (10 in pkg.)		●												●	●	2,3
Organic Vapor/P100 (GMA)	815178 (6 in pkg.)		●											●			2,3,4
Organic Vapor/P100 Short Stack (GMA)	815186 (6 in box)		●											●			2,3,4
Acid Gas (GMB)	464032 (10 in box)			●	●	●	●	●							●	●	2
Acid Gas/P100 (GMB)	815179 (6 in box)			●	●	●	●	●						●			2,4
Organic Vapor/Acid Gas (GMC)	464046 (10 in pkg.)		●	●	●	●	●	●							●	●	2,3
Organic Vapor/Acid Gas/P100 (GMC)	815180 (6 in box)		●	●	●	●	●	●						●			2,3,4
Organic Vapor/Acid Gas/P100 Short Stack (GMC)	815188 (6 in box)		●	●	●	●	●	●						●			2,3,4
Ammonia/Methylamine (GMD)	464033 (10 in box)								●	●					●	●	2,3
Ammonia/Methylamine/P100 (GMD)	815181 (6 in box)								●	●				●			2,3,4
Multigas (GME)	492790 (10 in box)		●	●	●	●	●	●	●	●	●	●			●	●	2,3
Multigas/P100 (GME)	815182 (6 in box)		●	●	●	●	●	●	●	●	●	●		●			2,3,4
Iodine Vapor/P100 (GMI)*	815184 (6 in box)		●											●			2,4
Chlorine/Mecury Vapor (Mersorb)	466204 (10 in box)			●									●		●	●	2
Chlorine/Mercury Vapor/P100 (Mersorb)	815185 (6 in box)			●									●	●			2,4
P100	815175 (10 in box)													●			1,4
Sparkfoe® P100	815176 (10 in box)													●			1,4
Low-Profile P100	815177 (10 in box)													●			1,4
Stand-alone and cover *N95 and covers required for Comfo Respirators*	816662 N95 (10 in pkg.) 816661 N95 (50 in box) 489353 Reusable snap-on cover (1 in pkg.; 2 req.)															●	1
Prefilter and Cover N95	816662 N95 (10 in pkg.) 816661 N95 (50 in pkg.) 489353 Reusable snap-on cover (1 in pkg.; 2 req.)															●	1
Prefilter and Cover R95	816287 R95 (20 in box) 489219 R95 Reusable snap-on cover (1 in pkg.; 2 req.)														●		1

FILTER SELECTION

Color	**Pollutant**
Pink 	Particles, vapors, dews.
Yellow	Organic, chemical vapors.
Black 	Organic vapors.
Combined 	Particles, vapors, dews / organic, chemical vapors.

NIOSH CODINGS

NIOSH It classifies filters according to their filtering capacity, as follows:

CODE	Oils/ Solvent Resistance
N	On the resistant
R	Resists up to 1 working day
P	Oil-proof, durable for more than 1 working day

CODE	EFFICIENCY
N95	Filters 95% oil-free particles and aerosols.
R95	It filters out particles and aerosols at 95%.
P100	Filters particles and aerosols up to99.97%.

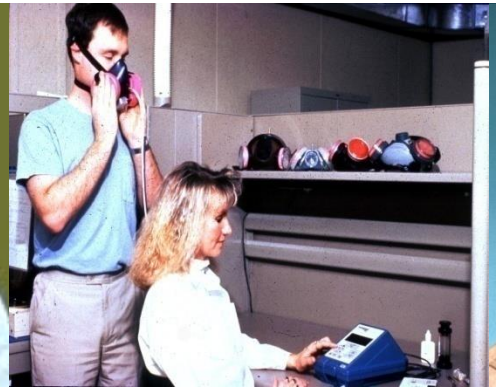
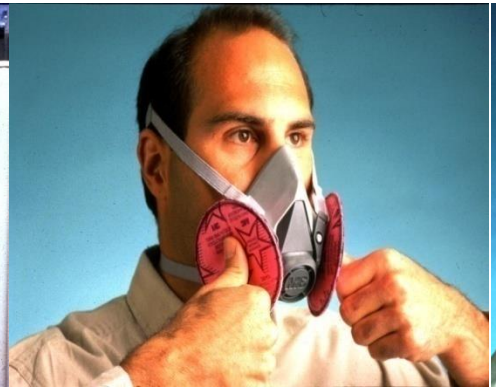
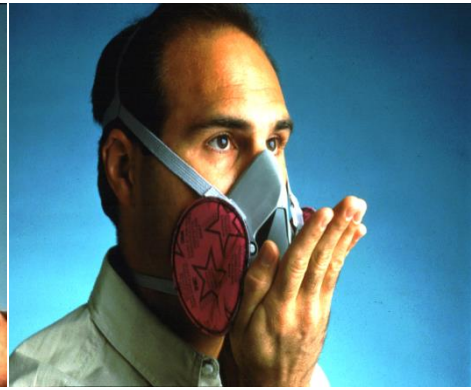
IMPORTANT FACTS

- Remember that the filter must be wet before throwing it away.
- The filter should not be cleaned with the VACUUM.
- The filter is disposable and should be replaced when you have difficulty inhaling.
- Respirators should be removed in the bathroom of the decontamination area.

SELECTION

- **FIT TESTS:**
- Qualitative
- Quantitative

- **SEAL CHECKS:**
- Negative Pressure
- Positive Pressure

IMPORTANT NOTE

Fit tests must be performed:

- **Annually**
- When you gain or lose 20 lbs of weight
- Facial changes, e.g. surgery, dentures:
- **Seal Tests Must Be Performed:**
- Every time you put on a respirator

AIR SAMPLES

Types:

✓Existing Contamination

✓Personnel

✓Areas (Within the work area,

✓Outside the work area)

✓Air Quality & Cleanliness

Time

- ✓ Continuous
- ✓ Intermittent (Random)
- ✓ Intermittent (at certain times, according to the job)

AIR MONITORING

- Daily
- 25% Workforce
- Work Area Air Samples
- Outside the area
- Outside DECON
- Outside the NAM machine

PROTECTION PROGRAM

OSHA Requires:

1. Subject employees to this program when:

- ❑ Work >PEL (0.1 f/cc) for more than 30 days out of a year,
- ❑ Negative pressure masks will be used.

COMPANY CITED FOR ASBESTOS VIOLATIONS

MAY 23, 2024

Recent inspections by the Washington Department of Labor & Industries (L&I) revealed that **Seattle Asbestos of Washington**—a Lynnwood, Washington-based asbestos removal contractor—has been fined nearly $800,000 for repeated hazard exposure.

MassDEP Fines Medway Construction Company for Asbestos Violations During Home Renovation

NEWS PROVIDED BY
Massachusetts Department of Environmental Protection
May 15, 2024,

- **BOSTON** — The Massachusetts Department of Environmental Protection (MassDEP) has fined Made 2 Build Inc., a Medway-based construction company, $58,550 for asbestos-related violations that occurred during a home renovation project in the Town of Medway.
- Responding to a complaint, MassDEP conducted an inspection and determined Made 2 Build Inc. failed to notify MassDEP of asbestos removal work. State regulation requires that companies, contractors, and operators notify MassDEP ten working days before any asbestos removal work. The Company also failed to follow proper removal and handling procedures for asbestos-containing materials.

Magistrate Recommends $19.8 Million Penalty for Asbestos Violations at Troubled Columbus Apartment Complex

5/3/2024

- (COLUMBUS, Ohio) — In response to arguments by Ohio Attorney General Dave Yost, a Franklin County Magistrate recommended a $19,840,000 civil penalty against the owners and property manager of an affordable housing apartment complex for violating Ohio's asbestos regulations, including exposing workers to asbestos danger without their knowledge.
- The recommended **penalty stems from work done at Sawyer Towers, a 400-unit complex** on the near east side of Columbus. This case was referred to the Attorney General's Office by the Ohio Environmental Protection Agency in March 2023.
- Franklin County Common Pleas Court Magistrate Jennifer D. Hunt recommends imposing the penalty against Boruch Drillman and Paxe Latitude LP, a limited partnership that Drillman fully controls, and a property management company, Aloft Management LLC.
- In August 2021, Paxe bought the Sawyer Towers complex, which needed extensive repairs and maintenance. The situation was so bad that the City of Columbus repeatedly cited the complex for extensive health code violations, even taking Paxe and Drillman to court.

- During the 2022 Christmas season, in an extreme cold spell, **water pipes burst and flooded the buildings**, forcing city officials to immediately evacuate residents from more than 160 apartments. The tenants left with nothing more than what they could carry, leaving most of their belongings in the buildings.
- Paxe, Drillman and Aloft hired contractors to fix the water damage and remove the mess – which included soaked drywall, carpets and ceiling tiles. But the owners and **property management company ignored the asbestos abatement plans** they had on file, **failed to inform contractors of the potential danger or supply the contractors' employees** with protective gear and caused significant harm to the environment and endangered residents. **The cleanup and restoration work led to the release of asbestos fibers throughout the complex**, preventing the return of residents and contaminating the belongings that tenants had been forced to leave behind.
- In addition, Paxe, Drillman and **Aloft also neglected to secure the apartment complex** after the tenants were evacuated, further spreading asbestos due to vandalism.
- In setting the recommended penalty, the court considered the extensive harm caused by the asbestos to contractors' employees. It also weighed the harm suffered by the community, the financial benefit received by the companies for avoiding appropriate remediation and the defendants' flagrant disregard for safety regulations and court orders.

WISCONSIN ASBESTOS COURT CASE # 1

- Wisconsin Appeals Court Doubles Punitive Damages to $13.4M in Pabst **Asbestos Death Suit**
- A Wisconsin Court of Appeals has denied an appeal by Pabst Brewing Company in an asbestos case, doubling the amount of punitive damages awarded by a jury at the trial court.
- The decision was issued by a three judge panel in early May 2024, in ***Lorbiecki v. Pabst Brewing Company***.
- Brewery tanks
- BySeth Mills, J.D.

WISCONSIN ASBESTOS COURT CASE # 2

- Wisconsin Jury Awards $9.7 Million Asbestos Verdict in Secondary Exposure Case
- May 26, 2023
- SWMW Law attorneys secure justice for family of **Wisconsin mother who died from mesothelioma after exposure to asbestos fibers from stepfather's clothing**
-
- ST. LOUIS, MO (May 25, 2023) – SWMW Law, one of the top law firms in the country focusing on plaintiffs' asbestos, consumer and product liability litigation, has secured a $9.7 million verdict on behalf of the family of Sarah Krentz, a Wisconsin mother who died in 2019 of mesothelioma, a rare and fatal cancer caused by asbestos exposure.


Rules and Regulations

FEDERAL RULES

Federal	**Meaning**	**COVERS**
EPA	*Environmental Protection Agency*	Environment NESHAP AHERA
OSHA	*Occupational Health and Safety Administration*	Occupational safety and health (enforces)
NIOSH	*Institute of Occupational Health and Safety*	Occupational safety and health (researches)
DOT	*Department of Transportation*	ACM transportation
DNR	*Department of Resources Naturales*	Demolition and renovation asbestos works (160 sf, 260 lf, 35 cf ACM)

EPA

Standard	Code	Regulates	Coverage
AHERA	40 CFR 763 Subpart E	Asbestos in schools	From kindergarten to grado12
NESHAP	40 CFR 61 subpart M	Demolition Remodeling	Public, private buildings (>260 lf, 160 sf, 35 cf)
ASHARA	Asbestos School Hazard Reauthorization Act	Training	All staff who work with asbestos in a school
Ley de Protección al Trabajador	40 CFR 763 (G) Worker Protection	Protect the worker where OSHA does not	All work where asbestos is handled
Ley de Desaparición del Asbesto	Phase out rule	Manufacture of asbestos products	94% of asbestos products

For more information at: www.usepa.gov

AHERA

Kindergarten to 12th grade

Requirements:

- Inspection
- Report ACM quantity and condition
- Implement control methods
- Operation and Maintenance

Note: All staff must have training based on MAP protocol (Model Accreditation Program)

NESHAP

Public, Private and commercial buildings with more than 4 units or apartments.

- Demolition
- Renovation
- Law applies to jobs of > 260 lf, 160 sf, 35 cf.

NESHAP

- **Keep the asbestos**:
- "Adequately wet."
- **Do not allow**:
- "Visible Emissions."
- NESHAP requires notification of projects 10 business days before starting them. All demolition projects.

ASHARA

- **Law created in 1990**
- Extends the regulations for training and certification of personnel under the MAP model to commercial and public buildings.

NIOSH

- National Institute of Occupational Health and Safety.
- Research and maintain statistics about occupational health and safety
- Recommends regulation to OSHA
- Approves respiratory masks.

DOT

U.S. Dept of Transportation

Department of Transportation

The U.S. Department of Transportation regulates the transportation of hazardous materials. Among them is asbestos.

Here are some rules:

Asbestos must be transported in serrated and sealed packaging and in dumpsters or sawn trucks

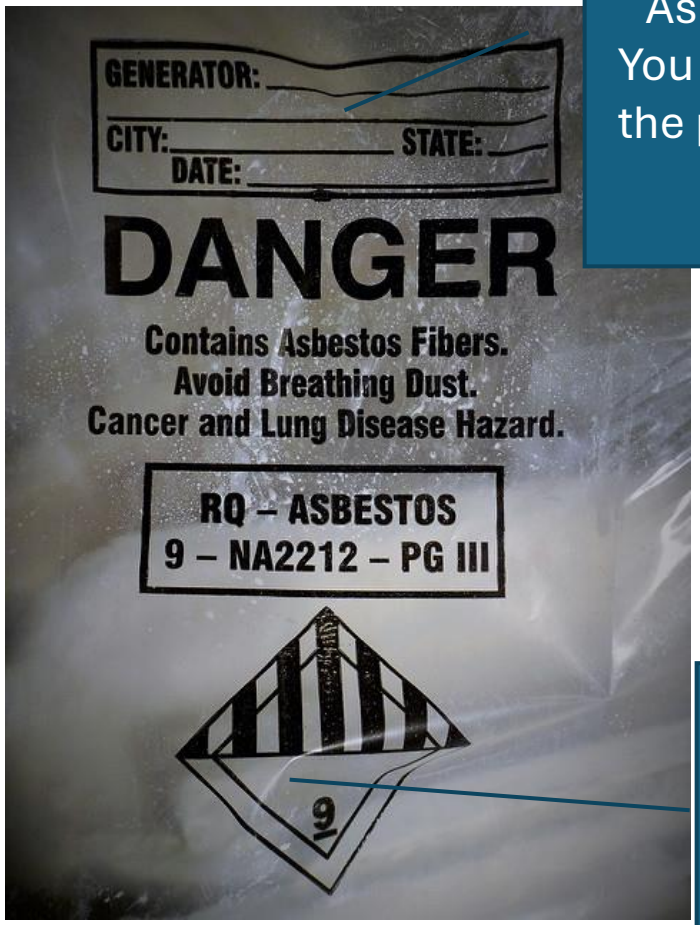
The person driving the truck must have a license and permission to transport the material

The truck must be directed directly to the disposal site

Dumpsters and trucks must have the warning symbol or warning label that identifies the asbestos: **9**

WASTE LABELS

OSHA Hazard Label



Asbestos Generator Label: You must have the address of the place where the asbestos was removed.

DOT label Department of Transportation

OSHA

Standard	Code	Regulates
Construction Industry	29 CFR 1926.1101	Worker Protection
General Industry	29 CFR 1910.1001	Worker Protection
Maritime Industry	29 CFR	Worker Protection
Respiratory Protection	29 CFR 1910.134	Protection Respiratory
Discrimination	Section 11-C	Employment discrimination for filing complaints

For more information on: www.osha.gov

YOUR RIGHTS

Standard	Code	Regulates
HazCom (Right to Know)	29 CFR 1910.1200	Chemical hazards in your work
Right to file a complaint	Section 11-C	Right to go to OSHA
Right to a Hazard-Free Workplace	29 CFR 1910.1001 29 CFR 1926.1101	Right to a Hazard-Free Workplace
Right to Refuse to Work Unsafely	Section 13(a)	Right to refuse unsafe working conditions

For more information on: www.osha.gov

OSHA SAFETY

Standard	Code	Regulates
Fall protection	29 CFR 1926.501-503 29 CFR 1910.1053 (ladders)	work at heights >6 feet
Noise	29 CFR 1910.95	95 db
Electrical safety	29 CFR 1926 - Subpart K	Electricity use Using GFCI
Head Protection	29 CFR 1926.100	

For more information visit: www.osha.gov

OSHA - ASBESTOS

Activity	**Covers**
Regulated Areas	Putting precautionary signs
Competent Person	Present in the workplace Inspect during each day You must attend supervisor training
Air Monitoring	PEL = 0.1 f/cc 8 h STEL o EL = 1 f/cc – 30 min. Daily air samples 25% workers
Medical Surveillance	Requires initial and annual examination if you work with negative pressure respirators or > 30 days/year
Respirators	Mandatory at all jobs >0.1 f/cc
PPE	Required in >25 lf or 10 sf TSI or SM removal or when there is no NEA or >PEL

For more information on: www.osha.gov

OSHA

Activity	**Covers**
Training	Initial and annual update equivalent to MAP
Activity Classification	Classes I – Classes II – Classes III Class IV
Decontamination	Required if >25 lf or 10 sf TSI or SM work Full DECON, rest areas
Engineering and Control Methods	Wet methods NAM, continuous cleaning
Work practices	Wet methods HEPA vacs - continuous and prompt cleaning
Prohibited Practices	High-revolution abrasive discs Sweeping the asbestos

For more information on: www.osha.gov

OSHA

Activity	**Covers**
Controls and Work Practices	Comprehensive HEPA local ventilation Enclosure and isolation of areas Direct ventilation Other areas of work Respirators
Prohibited Work Practices	Abrasive polishing discs or saws without HEPA connection Compressed air without collection device Sweeping/dry shoveling
Controls and Work Practices	Critical barriers / area isolation required if: >25 lf the TSI 10 sf the SM <25 lf or 10 sf of TSI or SM if there is no NEA (pre-exposure examination) or there are other workers nearby Isolation del HVAC Waterproof plastic on floors

For more information on: www.osha.gov

OSHA

Activity	**Covers**
Controls and Work Practices	Direct ventilation if there is no NEA or >PEL Objects must be covered and one or more of the following methods should be used: Area under negative pressure Glove bag Negative pressure glove bag Negative pressure glove box Spray water process Mini-lock

For more information on: www.osha.gov

SECTION 11-C

You have the right to file a complaint in case you are expelled from your job for fighting for your health and safety.

Although these cases are complicated, if you win the case:

- You will get your job back.
- You will keep your salary.
- You will keep your seniority.

Right to Know

You have the right to know the dangers in your work.

HAZCOM

29 CFR 1910.1200

STATE RULES

STATE	MEANING	COVERS
IDPH ▪ **Illinois**	*Illinois Department of Public Health* **Titulo 77 – Código 855**	Licensing Training Project Notification
DHS ▪ **Wisconsin**	*Department of Health Services* **DHS 159**	Certification Training Project Notification

Obtaining your license in Illinois

IDPH – Code 855

- **Training**: initially and annually
- **Reciprocity**: (if you honor training from other states – upgrade required at approved provider)
- **Training Expiration**: Annually.
- **License expiration**: Feb. 1 of each year.
- **Year of grace**: (1 year after training expiration)
- **Requirement to work**: license and certificate in force and at hand.

State of Illinois
Illinois Department of Public Health

APPLICATION FOR ASBESTOS WORKER LICENSE

IILLINOIS DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
525 WEST JEFFERSON STREET
SPRINGFIELD, IL 62761

ID# _____
For IDPH Use Only

$25.00 CHECK OR MONEY ORDER MUST ACCOMPANY THIS APPLICATION

Please Type or Print

APPLICANT NAME _____ _____ _____
First Name Middle Initial Last Name

HOME ADDRESS _____ COUNTY _____

CITY _____ STATE ____ ZIP CODE _____ HOME PHONE _____

SOCIAL SECURITY# _____ APPLICANT'S AGE _____ DATE OF BIRTH _____

In Accordance with the requirements of the *Illinois Administrative Procedure Act, 5 ILCS 100*, the Department of Public Health requires the disclosure of your social security number as part of the license application. Failure to provide your social security number shall result in the denial of your license application.

A COPY OF AN IDPH ACCREDITED INITIAL TRAINING COURSE CERTIFICATE SHALL BE INCLUDED WITH THE APPLICATION

The law (5ILCS/100/10-65) requires that all applicants complete and sign the following statement. Failure to complete and sign this statement will result in an incomplete application and delay in issuing your license. Making a false statement may place you in contempt of court. **Check only one box!**

☐ **I am not** more than 30 days delinquent in complying with a child support order; **or**

☐ **I am** more than 30 days delinquent in complying with a child support order; **or**

☐ **This statement does not apply.**

The Public Information Disclosure below must be completed to allow the Departmenbt to relase your personal contact information for public distribution, through freedom of information (FOI) request, Internet listing, etc. **ONLY** those asbestos licensees who complete this information will be inlcuded in the Department lists. By checking a box below, you authorize this Department to publish your business or personal information on all IDPH listings. Your signature further confirms your agreement to hold harmless and release this Department from any liability arising from release of the information authorized below. I authorize the Illinois Department of Public Health to include my:
(Check only **ONE** box) ☐ Personal Information ☐ I do not wish to be listed

SUBMIT TWO 1" x 1" PHOTOGRAPHS OF THE APPLICANT (*head and shoulders only*).

I hereby certify that the information submitted is true and valid and I understand that the Illinois Department of Public Health may deny, revoke or suspend my application for an Asbestos Worker License for knowingly making false or fraudulent claims.

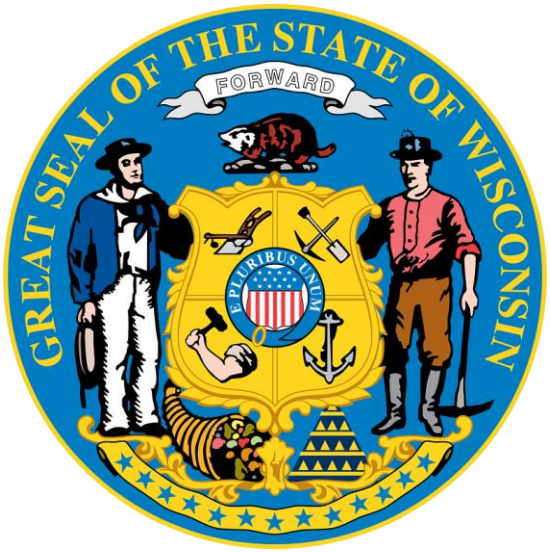
_____ _____
Signature Field DATE

IMPORTANT NOTICE
THIS STATE AGENCY IS REQUESTING DISCLOSURE OF INFORMATION THAT IS NECESSARY TO ACCOMPLISH THE STAUTORY PURPOSE AS OUTLINED UNDER PUBLIC ACT 83-1325. DISCLOSURE OF THIS INFORMATION IS MANDATORY. FAILURE TO PROVIDE ANY INFORMATION COULD RESULT IN DENIAL, REVOCATION OR SUSPENSION OF THE APPLICANTS LICENSE. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

Dates to Remember
(IDPH)

- **October 31**: If applicable before this date, the license expires in 4 months (Feb. 1 of the following year)
- **An example.**
- *If applied after this date, the license will expire in one year and 4 months, i.e. 16 months*.
- **December 31:** License renewal applicants must apply before this date, or not, must pay $40. ($15 fine + $25 license fee)
- **February 1:** All worker licenses expire on this date.

Regulations
DHS 159



Training and Certification Provisions

- This regulation covers companies, supervisors, and workers.
- Here are some aspects that affect you as a WORKER.
- Ask your instructor for a copy of the DHS 159.
- We have some printed versions available for review.

DHS 159
(Department of Health Services)

Certification Requirements:

- Fill out application
- Check or Money Order $ 75.00 (can pay online too)

Requirements for Out-of-State Individuals

- Full Application
- Check or Money Order for $ 75.00 + $ 25 (out of state fee)
- Initial Course Copy and all re-certifications

Provisional Certification

- You can use your training certificate to work while your license is being processed parentheses (*as long as you have submitted your complete application and fee to DHS*).

- You must keep a copy of your training certificate with you until you have your card.

- The DHS will issue a paper card. When you get it, you must keep a copy of it with you during the work period. A photo on your phone is OK.

STATE OF WISCONSIN
Department of Health Services
Division of Public Health

1 West Wilson Street
PO Box 2659
Madison WI 53701-2659

Telephone: 608-266-1568
Fax: 608-261-6392
TTY: 888-701-1253

Fecha: 23 de junio de 2022 BEOH Memo 2022-02a

Para: Empresas de asbesto certificadas

From: Lead and Asbestos Certification Unit

La certificación provisional para los solicitantes individuales dura ahora hasta que se emita la tarjeta de certificación

Antecedentes
El Wisconsin Admin. Code ch. DHS 159 permite a una persona realizar actividades reguladas relacionadas con el asbesto con una certificación provisional, mientras espera su tarjeta de certificación, si ha completado la formación requerida y ha solicitado la certificación al Department of Health Services (DHS) de Wisconsin. Cuando la certificación provisional finaliza, 30 días después de la fecha de la formación, un solicitante que todavía está esperando que se le emita su tarjeta de certificación no puede llevar a cabo actividades reguladas de asbesto.

Aunque el lenguaje de la regla actual limita la certificación provisional a 30 días después de la fecha de capacitación, el DHS está actualizando su proceso para permitir la continuación de la certificación provisional hasta que el DHS haya emitido una tarjeta de certificación (o denegado la solicitud de certificación). Esto permitirá que los solicitantes que de otro modo cumplan con los requisitos de certificación continúen realizando trabajos críticos regulados.

Lo que debe saber: La certificación provisional dura ahora hasta que el DHS emita o deniegue la tarjeta de certificación.

Todavía debe:

- Solicitar la certificación ***antes*** de realizar trabajos regulados.
- Tener su diploma de formación en el lugar de trabajo mientras realiza trabajos regulados. Una copia electrónica o impresa se considera válida.

Por favor, envíe un correo electrónico a Lead and Asbestos Certification Unit o llame al 608-261-6876 para cualquier pregunta.

Company Certification

Company Certification is required.
Every supervisor and worker must work for a certified company.

(including one-person operations)

Lisence Fee

$ 75
Note: Out of state applicants must
pay an additional **$ 25**.

Job Notification

- Asbestos projects generally need to be notified to either DHS or DNR
- Asbestos notice includes information about: the amounts of asbestos that will be removed, from where and when, and if those pieces of info change, the notice needs to be updated.
- DHS and DNR generally inspect projects to assure safe asbestos work is being done by certified workers who are directly supervised.

Project Log

DHS requires a Project Log
Log must be kept at jobsite and must be filled out daily.

- *Date*
- *Project Number*
- *Project Management*
- *Project supervisor's name and certification number*
- *Name of each person, signature, reason for entry, certification number, entry and exit times of each person entering the regulated area.*

DEPARTMENT OF HEALTH SERVICES
Division of Public Health
F-02052 (03/2017)

STATE OF WISCONSIN
Bureau of Environmental and Occupational Health
Wis. Admin. Code ch. DHS 159

ASBESTOS ABATEMENT PROJECT LOG

Wis. Admin. Code § DHS 159.21 (2) Project Log. The company shall maintain a project log onsite for each workday of an asbestos abatement activity. The daily project log shall include the date, project number as identified on the notification form required under Wis. Admin. Code § DHS 159.20, project address, printed name and certification number of the site supervisor, and the printed name, signature, reason for entry, department certification number, if appropriate, and the in and out times for each person who enters the regulated area. **Note:** asbestos abatement activities include both setup and teardown.

Date of Log	Project Number	Name – Project Supervisor (Printed)	Supervisor DHS Certification No.

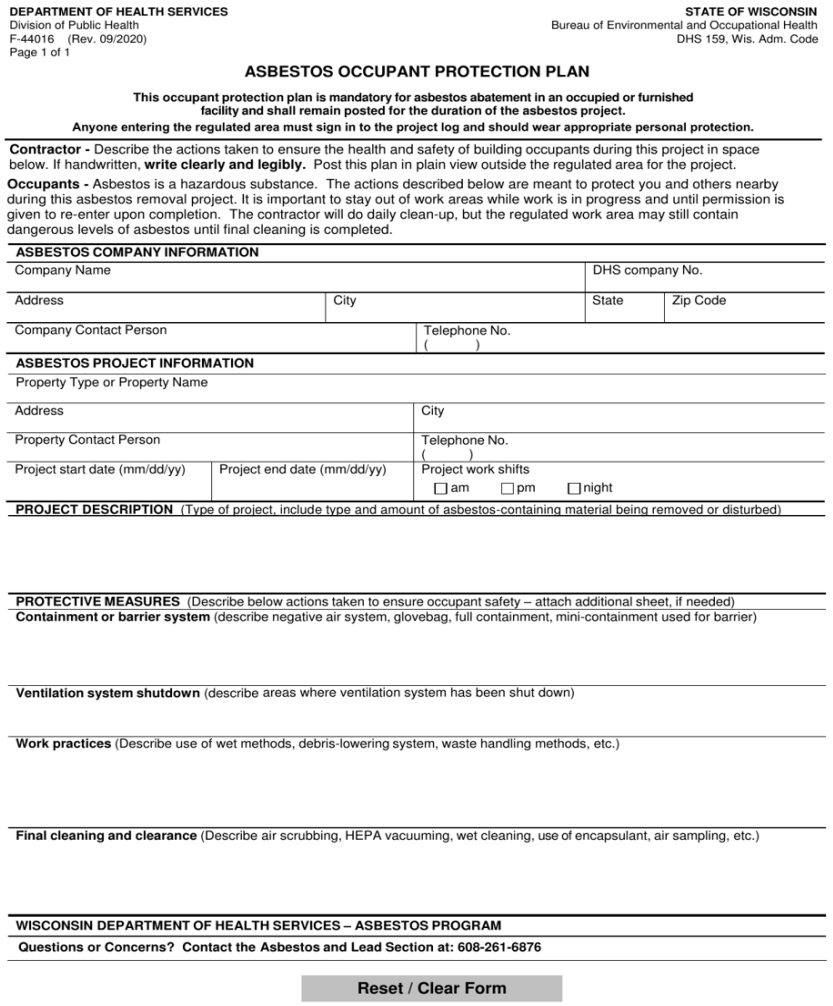
Project Address

NAME (printed)	SIGNATURE	DHS CERT. NO.	REASON ENTERING REGULATED AREA	TIME IN	TIME OUT	TIME IN	TIME OUT	TIME IN	TIME OUT

Occupant Protection Plan

*DHS requires a **Occupant Protection Plan**, which informs tenants of a building that asbestos work is going to be carried out. This form should include:*

- *Name, address, and phone number of the asbestos company.*
- *Project address, name and telephone number of the contact person*
- *Start and end dates of the project including working days*
- *A paragraph stating that only authorized and PPE personnel may enter the regulated area*
- *Description of the control methods to be used*
- *Description of any activities to be performed*



DEPARTMENT OF HEALTH SERVICES
Division of Public Health
F-44016 (Rev. 09/2020)
Page 1 of 1

STATE OF WISCONSIN
Bureau of Environmental and Occupational Health
DHS 159, Wis. Adm. Code

ASBESTOS OCCUPANT PROTECTION PLAN

This occupant protection plan is mandatory for asbestos abatement in an occupied or furnished facility and shall remain posted for the duration of the asbestos project.

Anyone entering the regulated area must sign in to the project log and should wear appropriate personal protection.

Contractor - Describe the actions taken to ensure the health and safety of building occupants during this project in space below. If handwritten, **write clearly and legibly.** Post this plan in plain view outside the regulated area for the project.

Occupants - Asbestos is a hazardous substance. The actions described below are meant to protect you and others nearby during this asbestos removal project. It is important to stay out of work areas while work is in progress and until permission is given to re-enter upon completion. The contractor will do daily clean-up, but the regulated work area may still contain dangerous levels of asbestos until final cleaning is completed.

ASBESTOS COMPANY INFORMATION

Company Name		DHS company No.	
Address	City	State	Zip Code
Company Contact Person	Telephone No. ( )		

ASBESTOS PROJECT INFORMATION

Property Type or Property Name			
Address		City	
Property Contact Person		Telephone No. ( )	
Project start date (mm/dd/yy)	Project end date (mm/dd/yy)	Project work shifts ☐ am ☐ pm ☐ night	

PROJECT DESCRIPTION (Type of project, include type and amount of asbestos-containing material being removed or disturbed)

PROTECTIVE MEASURES (Describe below actions taken to ensure occupant safety – attach additional sheet, if needed)

Containment or barrier system (describe negative air system, glovebag, full containment, mini-containment used for barrier)

Ventilation system shutdown (describe areas where ventilation system has been shut down)

Work practices (Describe use of wet methods, debris-lowering system, waste handling methods, etc.)

Final cleaning and clearance (Describe air scrubbing, HEPA vacuuming, wet cleaning, use of encapsulant, air sampling, etc.)

WISCONSIN DEPARTMENT OF HEALTH SERVICES – ASBESTOS PROGRAM

Questions or Concerns? Contact the Asbestos and Lead Section at: 608-261-6876

Reset / Clear Form

Document Archiving

DHS requires new companies to keep records of each project for at least 3 years. These records should include:

- *Any written project contract,*
- *Project Notification, Project Logs, Tenant Protection Plan,*
- *Results of the analysis of the laboratory package samples.*

Asbestos Certification Process in Wiscosin

Apply for Lead or Asbestos Certification

Apply online

Most people and companies can apply using our online application.

If you took training outside of Wisconsin, need to submit documents, or are requesting a fee exemption, **you must apply by mail.**

You may also use the system to update information like your mailing address, or order a replacement card.

Apply for Wisconsin Asbestos and Lead Certifications

On this Department of Health Services (DHS) site you can:

1. Apply for INITIAL or RENEWAL Individual Certifications
2. Apply for INITIAL or RENEWAL Company Certifications
3. Apply for a REPLACEMENT card or certificate if lost or damaged
4. Update Personal or Company contact information
5. Print an application form for your records or to submit by mail

Did you take your training in another State? If so, you must submit a paper application with supporting documentation. Select **Print Application Form** below.

For assistance, contact the DHS Asbestos and Lead office at 608-261-6876, Monday through Friday, between 8:00 a.m. and 4:30 p.m.

Continue | Print Application Form | Exit

Choose Company Certification or Individual Certification

You can apply for an **individual certification** or **company certification** in WALDO. Need both? Apply for your company certificate first.

You can also update contact information for individuals and companies that are already certified.

Company Certification	Individual Certification
Use this option to apply for company certification or update company information, such as its mailing or records address. Anybody conducting regulated lead or asbestos work needs to be associated with a certified company.	Use this option to apply for a certification card (training requirements apply). You cannot apply online if any of your qualifying training was taken outside of Wisconsin, or if you are applying with a certification fee exemption.

Step 1: Search for your record

Select (using the button) and complete the **FIRST-TIME APPLICANT** or **RETURNING APPLICANT** section. Then search.

◉ FIRST-TIME APPLICANT

Use this if you haven't been certified in lead or asbestos before. If you are returning to complete an application you already started, use the **Returning Applicant** search below.

Your Name
Enter your name exactly as printed on your official ID. Letters and spaces are accepted. Include all surnames and separate with spaces. Hyphens are not accepted.

First Name

Last Name/Surname

Date of Birth (mm/dd/yyyy)

○ RETURNING APPLICANT

Use this if you have been certified in lead or asbestos before, or if you are returning to complete an application you already started.

Your Name
Enter your name exactly as printed on your official ID. Letters and spaces are accepted. Include all surnames and separate with spaces. Hyphens are not accepted.

First Name

Last Name/Surname

Date of Birth (mm/dd/yyyy)

Social Security Number (No spaces or hyphens)

Search

Step 2: Add, Verify and/or Update Your Information

We Found You! Please review and verify the information below.
Update missing or incorrect information before continuing.
Do not use apostrophes, hyphens, commas, periods or other punctuation.

DHS ID [redacted]
First Name [redacted] Middle Name
Last Name [redacted] Suffix
SSN
Height (required) [redacted] ft. [redacted] in. Weight (required) [redacted] lbs.

Mailing Address (required)
Street Address [redacted]
PO Box Route
City MADISON
State WI Zip Code 53703 3445

At least one of the following is required:
Phone [redacted] - [redacted] - [redacted] x
Cell - - x
Email

Select **Save** then **Exit** if you have completed needed changes and you are not submitting an application at this time.

If submitting an application, select **Save** then **Continue** to save and go to the next step.

Save Continue Return to Search Page Exit

Step 3: Select Certification Options

Last Name [redacted] First Name [redacted] DHS No. [redacted]

- Select one or more of the certification options below to begin your application.
- If you believe you qualify for a certification discipline not listed, please contact us at 608-261-6876, M-F, 8:00 a.m. - 4:30 p.m.

Certification Options

Discipline	Last Certification Issued	Expiration Date	Eligible Options -- select one or more		
Lead-Safe Renovator			☑ Apply	☐ 2 Year	☑ 4 Year

Training Completed: Your most recent training class in each discipline is listed below.

Class	Training Provider	Training Date(s)	Completed
INITIAL - Abatement Supervisor -- Asbestos	[redacted]	01/10/2011 - 01/14/2011	Y
INITIAL - Lead-Safe Renovation -- Lead	[redacted]	01/05/2022 - 01/05/2022	Y

Note: If you completed training within the past 5 days it may not yet be recorded in the database. Training providers submit student completion information within 5 working days after a class is completed. If more than a week has passed and your class is not listed, please contact your training provider.

If you took training for a LEAD discipline in another state: You must apply by mail or in person and provide the supporting documentation listed on page 2 of the printed application form.

If you took training for an ASBESTOS discipline in another state: Your most recent training for an asbestos discipline must be taken in Wisconsin. If you have not yet taken a Wisconsin initial or refresher asbestos course required for a certification you must do so before you may apply. A list of Wisconsin-accredited training providers may be found at: www.dhs.wi.gov/asbestos/Training.htm

Continue | Return to Previous Page | Print Application Form | Exit

Step 4: Review Your Selections and Fees

Last Name [redacted] First Name [redacted] DHS No. [redacted]

Certification Disciplines Selected

Discipline	Action	Fee	Exam Fee	TOTAL DUE
Lead-Safe Renovator	Apply	$150.00	$0.00	$150.00
			Total Fees	$150.00

☐ Please send me a new cleaning verification card

Continue | Return to Previous Page | Print Application Form | Exit

Step 5: Employer / Company Information

Last Name [redacted] First Name [redacted] DHS No. [redacted]

If your company information is blank or incorrect, please enter your current Company Name or DHS Company Certification Number. Typing part of the company name will bring up a list of similarly named companies. Highlight your company from the list and press 'Enter' to select.

Note: You may continue the application process without providing company information, but you MUST work for, own or be affiliated with a certified company before you may conduct work that requires you to be certified. If you are self-employed you must still certify a company in order to conduct regulated work.

DHS Company Certification Number: 0

Company Name:

( ) -

Step 6: Affidavits

Last Name [redacted] First Name [redacted] DHS No. [redacted]

The following information is required to complete your application.

1. Within the past 5 years, did you have an asbestos or lead license or certification denied, suspended or revoked by another state, Indian Tribe or the U.S. Environmental Protection Agency?
   ◉ **No** ○ **Yes** **State:**

2. Within the past 5 years was action taken against you for a civil or criminal violation of statutes, regulations or ordinances of the United States, in this state, any other state, or any local government substantially related to asbestos activities, lead-based paint activities or other environmental activities?
   ◉ **No** ○ **Yes** **State:**

If you answered 'Yes' to either or both of the above questions, describe the date of the violation, the nature of the violation, the date enforcement action was final, the type of enforcement action taken and the agency issuing the enforcement.

Applicant Affidavit

I state that I am the person referred to on this application and that all answers set forth are strictly true in each respect. I understand that false statements made in connection with this application may be grounds for denying or revoking my certification or for other disciplinary or legal action. I also understand that if I am issued a certification card, failure to comply with the laws or rules of the State of Wisconsin may be cause for disciplinary or legal action. I affirm that I currently work for or own a certified company, or that I will work for a certified company when conducting work regulated under Ch. DHS 159 or DHS 163, Wis. Adm. Code.

☐ **I affirm the above statements.**

Continue | Return to Previous Page | Print Application Form | Exit

Step 7: Final Review and Submittal

Last Name [redacted] First Name [redacted] DHS No. [redacted]

Before proceeding with your payment, please verify that the certifications listed below are correct. **Once paid, fees are not refundable.**

Discipline	Action	Fee	Exam Fee	TOTAL DUE
Lead-Safe Renovator	Apply	$150.00	$0.00	$150.00
			Total Fees	$150.00

Payment methods accepted:

1. VISA or MasterCard credit or debit account
2. Electronic funds transfer from checking or savings account

Instructions:

1. Print a copy of your application for your records by selecting **Print Application Form** below. The application will open in Adobe Acrobat as a PDF file.
2. Select **Submit and Pay.**
   - A **Make a Payment** screen will open in a separate window. You may need to turn off your Pop-up Blocker to access the payment window.
   - Complete all required information then select the payment method of your choice.
   - Follow instructions for completing your payment.
   - If your payment is not accepted, select **Cancel** and choose an alternate payment method, or mail a paper application with a check or money order. (See instructions below)
3. A payment confirmation number is provided on the **Payment Confirmation Page** if your payment is accepted.
   - Print the payment confirmation page or record the confirmation number.
   - Your application cannot be processed until payment is confirmed.
   - You will receive a payment confirmation email from noreplydhsasbestoslead@epymtservice.com.
   - Select **EXIT** to close the confirmation page.
4. Your company certificate will be processed and mailed to you usually within 4 to 15 business days.
5. Questions? Call 608-261-6876, Monday through Friday, 8:00 a.m. - 4:30 p.m.

THANK YOU FOR APPLYING ONLINE

Mailing a paper application:
Print your application. Be sure all requested information is complete. Federal Employer Identification Number (FEIN) or Social Security Number is required. Sign the affidavit statement. Make your check or money order payable to **DHS** and mail with your application to the address provided on the application.

Submit and Pay

Print Application Form | Return to Previous Page | Exit

State of Wisconsin

e-Payment Services

Make a Payment

My Payment

fees.

Amount Due	$150.00
Order Number	
Applicant First Name	
Applicant Last Name	[redacted]
Revenue Type	Lead
Appropriation	121
Certification Number	[redacted]
Enterer's ID	onLinePublic
Session ID	

Payment Information

Frequency	One Time
Payment Amount	$150.00
Payment Date	Pay Now

Contact Information

First Name	
Last Name	
Company	(Optional)
Address 1	
Address 2	(Optional)
City/Town	
State/Province/Region	
Zip/Postal Code	
Country	
Phone Number	
Email Address	

Payment Method

Payment Method Select

Continue Cancel

OSHA® FactSheet

Asbestos

Asbestos is a naturally occurring mineral fiber. It was used in numerous building materials and vehicle products for its strength and ability to resist heat and corrosion before its dangerous health effects were discovered. Individual asbestos fibers cannot be seen by the naked eye, which puts workers at an increased risk. The Occupational Safety and Health Administration (OSHA) has regulations to protect workers from the hazards of asbestos.

What is the hazard?

Asbestos fibers are released into the air during activities that disturb asbestos-containing materials.

The asbestos fibers can then be inhaled without knowing and trapped in the lungs. If swallowed, they can become embedded into the digestive tract as well.

Asbestos is a known human carcinogen and can cause chronic lung disease as well as lung and other cancers. Symptoms and/or cancer may take many years to develop following exposure.

Where is the hazard?

The hazard may occur during manufacturing of asbestos-containing products; performing brake or clutch repairs; renovating or demolishing buildings or ships; or cleanup from those activities; contact with deteriorating asbestos-containing materials and during cleanup after natural disasters.

Some materials are presumed to contain asbestos if installed before 1981. Examples of these materials, as well as other presumed asbestos-containing materials are:

- Thermal system insulation
- Roofing and siding shingles
- Vinyl floor tiles
- Plaster, cement, putties and caulk
- Ceiling tiles and spray-on coatings
- Industrial pipe wrapping
- Heat-resistant textiles
- Automobile brake linings and clutch pads

OSHA Standards

OSHA has three standards to protect workers from the hazards of asbestos depending on the type of workplace. For complete information on all of the requirements, see the standard specific to your type of workplace:

General Industry: 29 CFR 1910.1001 covers work in general industry, such as exposure during brake and clutch repair, maintenance work, and manufacture of asbestos-containing products.

Shipyards: 29 CFR 1915.1001 covers construction, alteration, repair, maintenance, renovation and demolition of structures containing asbestos during work in shipyards.

Construction: 29 CFR 1926.1101 covers construction, alteration, repair, maintenance, or renovation and demolition of structures containing asbestos.

What protections exist in the Standards?

- **Permissible Exposure Limit (PEL)** for asbestos is 0.1 fiber per cubic centimeter of air as an eight-hour time-weighted average (TWA), with an excursion limit (EL) of 1.0 asbestos fibers per cubic centimeter over a 30-minute period. The employer must ensure that no one is exposed above these limits.
- **Assessment** of workplaces covered by the standards must be completed to determine if asbestos is present and if the work will generate airborne fibers by a specific method under each standard.
- **Monitoring** necessary to detect if asbestos exposure is at or above the PEL or EL for workers who are, or may be expected to be exposed to asbestos. Frequency depends on work classification and exposure. The construction and shipyard standards require assessment and monitoring by a competent person.

- If the exposure has the potential to be above the PEL or EL, employers must use proper **engineering controls and work practices** to the extent feasible to keep it at or below the PEL and EL. Where feasible engineering controls and work practices do not ensure worker protection at the exposure limits, employers must reduce the exposures to the lowest level achievable and then supplement with proper **respiratory protection** to meet the PEL. The construction and shipyard standards contain specific control methods depending on work classification, and the general industry standard has specific controls for brake and clutch repair work.
- **Proper hazard communication and demarcation** with warning signs containing specified language in areas that have exposures above the PEL or EL is necessary. No smoking, eating, or drinking should occur in these areas and proper PPE must be provided and used to prevent exposure.
- **Separate decontamination and lunch areas** with proper hygiene practices must be provided to workers exposed above the PEL to avoid contamination.
- **Training** requirements depend on the workplace exposure and classification. Training must be provided to all workers exposed at or above the PEL before work begins and yearly thereafter. All training must be conducted in a manner and language in which the worker is able to understand. Workers who perform housekeeping operations in buildings with presumed asbestos-containing materials but not at the PEL must also be provided asbestos awareness training.
- **Medical surveillance** requirements are different depending on the industry. Medical surveillance must be provided for workers who engage in certain classifications of work, or experience exposures at or above the PEL in construction and shipyards. In general industry, medical examinations must be provided for workers who experience exposure at or above the PEL.
- **Records** must be kept on exposure monitoring for asbestos for at least 30 years, and worker medical surveillance records retained for the duration of employment plus 30 years. Training records must be kept for at least 1 year beyond the last date of employment.

Contact OSHA

For more information on this and other health-related issues impacting workers, to report an emergency, fatality or catastrophe, to order publications, to file a confidential complaint, or to request OSHA's free on-site consultation service, contact your nearest OSHA office, visit www.osha.gov, or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.

Worker Rights

Workers have the right to:

- Working conditions that do not pose a risk of serious harm.
- Receive information and training (in a language and vocabulary the worker understands) about workplace hazards, methods to prevent them, and the OSHA standards that apply to their workplace.
- Review records of work-related injuries and illnesses.
- Get copies of test results that find and measure hazards.
- File a complaint asking OSHA to inspect their workplace if they believe there is a serious hazard or that their employer is not following OSHA's rules.
- OSHA will keep all identities confidential.
- Exercise their rights under the law without retaliation or discrimination.

For more information, see OSHA's workers page.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For assistance, contact us. We can help. It's confidential.

OSHA® Occupational Safety and Health Administration

U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

DEP FS-3507 01/2014

OSHA FactSheet

CONTROL SILICA DUST
Breathe Easier

OSHA's Respirable Crystalline Silica Standard for Construction

Workers who are exposed to respirable crystalline silica dust are at increased risk of developing serious silica-related diseases. OSHA's standard requires employers to take steps to protect workers from exposure to respirable crystalline silica.

What is Respirable Crystalline Silica?

Crystalline silica is a common mineral that is found in construction materials such as sand, stone, concrete, brick, and mortar. When workers cut, grind, drill, or crush materials that contain crystalline silica, very small dust particles are created. These tiny particles (known as "respirable" particles) can travel deep into workers' lungs and cause silicosis, an incurable and sometimes deadly lung disease. Respirable crystalline silica also causes lung cancer, other potentially debilitating respiratory diseases such as chronic obstructive pulmonary disease, and kidney disease. In most cases, these diseases occur after years of exposure to respirable crystalline silica.

How are Construction Workers Exposed to Respirable Crystalline Silica?

Exposure to respirable crystalline silica can occur during common construction tasks, such as using masonry saws, grinders, drills, jackhammers and handheld powered chipping tools; operating vehicle-mounted drilling rigs; milling; operating crushing machines; using heavy equipment for demolition or certain other tasks; and during abrasive blasting and tunneling operations. About two million construction workers are exposed to respirable crystalline silica in over 600,000 workplaces.

What Does the Standard Require?

The standard (29 CFR 1926.1153) requires employers to limit worker exposures to respirable crystalline silica and to take other steps to protect workers. Employers can either use a control method laid out in Table 1 of the construction standard, or they can measure workers' exposure to silica and independently decide which dust controls work best to limit exposures in their workplaces to the permissible exposure limit (PEL).

What is Table 1?

Table 1 matches 18 common construction tasks with effective dust control methods, such as using water to keep dust from getting into the air or using a vacuum dust collection system to capture dust. In some operations, respirators may also be needed. Employers who follow Table 1 correctly are not required to measure workers' exposure to silica from those tasks and are not subject to the PEL.

Table 1 Example: Handheld Power Saws

If workers are sawing silica-containing materials, they can use a saw with a built-in system that applies water to the saw blade. The water limits the amount of respirable crystalline silica that gets into the air.

Table 1: Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica

Equipment/ Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hrs/ shift	> 4 hrs/ shift
Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • When used outdoors. • When used indoors or in an enclosed area.	None APF 10	APF 10 APF 10

Excerpt from Table 1 in 29 CFR 1926.1153

In this example, if a worker uses the saw outdoors for four hours or less per day, no respirator would be needed. If a worker uses the saw for more than four

OSHA FactSheet

Protecting Workers from Lead Hazards

Cleaning up after a flood requires hundreds of workers to renovate and repair, or tear down and dispose of, damaged or destroyed structures and materials. Repair, renovation and demolition operations often generate dangerous airborne concentrations of lead, a metal that can cause damage to the nervous system, kidneys, blood forming organs, and reproductive system if inhaled or ingested in dangerous quantities. The Occupational Safety and Health Administration (OSHA) has developed regulations designed to protect workers involved in construction activities from the hazards of lead exposure.

How You Can Become Exposed to Lead

Lead is an ingredient in thousands of products widely used throughout industry, including lead-based paints, lead solder, electrical fittings and conduits, tank linings, plumbing fixtures, and many metal alloys. Although many uses of lead have been banned, lead-based paints continue to be used on bridges, railways, ships, and other steel structures because of its rust- and corrosion-inhibiting properties. Also, many homes were painted with lead-containing paints. Significant lead exposures can also occur when paint is removed from surfaces previously covered with lead-based paint.

Operations that can generate lead dust and fumes include:

- Demolition of structures;
- Flame-torch cutting;
- Welding;
- Use of heat guns, sanders, scrapers, or grinders to remove lead paint; and
- Abrasive blasting of steel structures

OSHA has regulations governing construction worker exposure to lead. Employers of construction workers engaged in the repair, renovation, removal, demolition, and salvage of flood-damaged structures and materials are responsible for the development and implementation of a worker protection program in accordance with Title 29 Code of Federal Regulations (CFR), Part 1926.62. This program is essential to minimize worker risk of lead exposure. Construction projects vary in their scope and potential for exposing workers to lead and other hazards. Many projects involve only limited exposure, such as the removal of paint from a few interior residential surfaces, while others may involve substantial exposures. Employers must be in compliance with OSHA's lead standard at all times. A copy of the standard and a brochure — Lead in Construction (OSHA 3142) — describing how to comply with it, are available from OSHA Publications, P.O. Box 37535, Washington, D.C. 20013-7535, (202) 693-1888(phone), or (202) 693-2498(fax); or visit OSHA's website at www.osha.gov.

Major Elements of OSHA's Lead Standard

- A permissible exposure limit (PEL) of 50 micrograms of lead per cubic meter of air, as averaged over an 8-hour period.
- Requirements that employers use engineering controls and work practices, where feasible, to reduce worker exposure.
- Requirements that employees observe good personal hygiene practices, such as washing hands before eating and taking a shower before leaving the worksite.
- Requirements that employees be provided with protective clothing and, where necessary, with respiratory protection accordance with 29 CFR 1910.134.

- A requirement that employees exposed to high levels of lead be enrolled in a medical surveillance program.

Additional Information

For more information on this, and other health-related issues impacting workers, visit OSHA's Web site at www.osha.gov.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For more complete information:

OSHA Occupational Safety and Health Administration

U.S. Department of Labor

www.osha.gov

(800) 321-OSHA

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OSHA FactSheet

Mold

Molds are the most common forms of fungi found on earth. They can grow on almost any material, as long as moisture and oxygen are available. Most molds reproduce through the formation of spores, tiny microscopic cells that are resistant to drying and are released into the air. Airborne spores are found both indoors and outdoors. When spores land on a suitable moist surface, they begin to grow and release chemicals that digest and can eventually destroy the surface and underlying materials. Molds can also cause adverse health effects.

Health Effects of Mold Exposure

Molds can cause mild to severe health problems in sensitive individuals when a sufficient number of airborne spores are inhaled. Some individuals are far more sensitive than others. The most common health effects associated with mold exposure are allergic reactions. Symptoms may include:

- Sneezing
- Runny nose
- Eye irritation
- Cough
- Congestion
- Aggravation of asthma
- Dermatitis (skin rash)

People at Greatest Risk

Infants, children, and the elderly are more susceptible to health problems attributable to molds. In addition, people with the following underlying health conditions may be more sensitive to molds:

- Individuals with allergies or existing respiratory conditions including asthma, sinusitis, or other lung diseases.
- Individuals with a weakened immune system (e.g., HIV patients).
- Recent organ or bone marrow transplant patients.
- Patients recovering from recent surgery and receiving chemotherapy or long-term steroid treatment.

How to Recognize Mold

Mold may be recognized by:

- Sight – They usually appear as distinctly colored woolly mats (e.g., mildew is black and is one of the most common molds in a household).
- Smell – They often produce a foul odor, such as a musty, earthy smell.

Preventing Mold Growth

The key to mold prevention is moisture control. Mold will not grow if moisture is absent.

- Remove excess moisture with a wet-dry vacuum and dry out the building as quickly as possible (preferably within 24 to 48 hours).
- Use fans to assist in the drying process.
- Clean wet materials and surfaces with detergent and water.
- Discard all water damaged materials.
- Discard all materials visibly contaminated with mold.
- Remove and discard all porous materials that have been wet for more than 48 hours. Porous materials cannot be cleaned and may remain a source of mold growth. These materials include the following:
  - Carpeting and carpet padding;
  - Upholstery, wallpaper, drywall;
  - Floor and ceiling tiles, insulation materials;
  - Clothing;

- Leather;
- Paper, wood;
- Food.

- Homeowners may want to temporarily store items outside of the home until insurance claims can be filed.

General Cleanup Tips

- Make sure the working area is well ventilated.
- Place mold damaged materials in a plastic bag and discard.
- Clean mold off hard surfaces and other nonporous materials with detergent and water, and dry completely.
- Disinfect these cleaned surfaces with one of the following household bleach solutions:
  - 1/4 cup household bleach per 1 gallon of clean water for light contamination.
  - 1 1/2 cups household bleach per 1 gallon of clean water for heavy contamination.

CAUTION: Do not mix bleach with other cleaning products that contain ammonia. Highly toxic chlorine gas can be produced.

- Avoid breathing mold spores. A N-95 respirator is recommended.
- Avoid touching mold with your bare hands. Long gloves that extend to the middle of the forearm are recommended. Use ordinary household rubber gloves when cleaning surfaces with water, bleach, and a mild detergent. Gloves made from natural rubber, neoprene, nitrile, polyurethane, or PVC are recommended if using a disinfectant, biocide, or strong cleaning solution.
- Avoid getting mold spores in your eyes. Goggles without ventilation holes are recommended.

Additional Information

Visit OSHA's Safety and Health Topics webpage on Molds and Fungi at http://www.osha.gov/SLTC/molds/index.html

For more complete information:

OSHA Occupational Safety and Health Administration

U.S. Department of Labor

www.osha.gov

(800) 321-OSHA

DSG 9/2005

FOR MORE INFORMATION ON AGENCIES

SOURCE	WEB
EPA	www.usepa.gov
OSHA	www.osha.gov
DOT	www.usdot.gov
State of Illinois	https://dph.illinois.gov/topics-services/environmental-health-protection/asbestos.html
State of Indiana Asbestos	https://www.in.gov/idem/asbestos/
Minn. DOH	www.mdh.gov
Missouri Department of Natural Resources	https://dnr.mo.gov/air/business-industry/asbestos
Wisc. DHS	https://www.dhs.wisconsin.gov/asbestos/index.htm
Wisc. DNR	https://dnr.wisconsin.gov/topic/Demo/Asbestos.html

OTHER SEFETY HAZARDS

Electrical = Use GFCI – Lock/Labeling - Maintain Elevated Extensions

Chemicals = Read the SDS

Ladders = Protection from 6' (construction)

& Scaffolding

Heat Stress = Dehydration, heat stroke, heat exhaustion

Fires and Explosions = Sparks, gases, oxygen levels >23.5%

Slips, Trips and Falls = Tools on floor, water on floor

Review Questions for Test

- ACBM
- >1% asbestos
- No Visible Emissions
- Mini-containment
- 0.01 f/cc
- Glovebags
- Encapsulant
- Surfactant
- Protection Factor of 10
- 0.1 f/cc in 8 hours TWA

A Control Method

The Clearance Level

Add to Amended Water

The Asbestos PEL

ACM

Can be done by 2 Workers

NESHAP Requirement

AHERA Asbestos Containing Materials

Half Face Mask

Must Be Clear

Work safely!