



New Jersey Department of Health

HAZARDOUS SUBSTANCE FACT SHEET

PLAINTIFF'S EXHIBIT

KRC-529

COMMON NAME: ASBESTOS

CAS NUMBER: 1332-21-4

DOT NUMBER: UN 2212/UN 2590

HAZARD SUMMARY

- * Asbestos can affect you when breathed in.
- * Asbestos is a CARCINOGEN--HANDLE WITH EXTREME CAUTION.
- * Repeated exposure can cause a disease called *Asbestosis* to develop some years after exposure begins. *Asbestosis* causes scarring of the lungs, changes

on chest x-ray, and symptoms of shortness of breath with exertion and possibly a dry cough. Progression of *Asbestosis* can lead to disability and death. The earlier exposure is stopped, the better the chance of stopping serious disease later.

IDENTIFICATION

Asbestos is the common name for a group of mineral fibers that range in color from white, green, brown, or blue. It is used as a fireproofing and insulating agent and in brake linings.

REASON FOR CITATION

- * Asbestos is on the Workplace Hazardous Substance List because it is regulated by OSHA and cited by NIOSH, IARC, NTP and CAG.
- * This chemical is also on the Special Health Hazard Substance List because it is a CANCER-CAUSING AGENT.
- * Definitions are provided on page 5.

WORKPLACE EXPOSURE LIMITS

OSHA: The legal airborne permissible exposure limit (PEL) is ~~0.2-0~~ ^{0.2} fibers/cc averaged over an 8-hour workshift and 10.0 fibers/cc, not to be exceeded during any 15 minute work period.

NIOSH: The recommended airborne exposure limit is 0.1 fibers/cc averaged over an 8-hour workshift and 0.5 fibers/cc, not to be exceeded during any work period.

- * Asbestos is a CANCER-CAUSING AGENT in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED

- * Exposure to hazardous substances should be routinely evaluated. This may include collecting personal and area air samples. You can obtain copies of sampling results from your employer. You have a legal right to this information under OSHA 1910.20.
- * If you think you are experiencing any work-related health problems, see a doctor trained to recognize occupational diseases. Take this Fact Sheet with you.

WAYS OF REDUCING EXPOSURE

- * Where possible, enclose operations and use local exhaust ventilation at the site of chemical release. If local exhaust ventilation or enclosure is not used, respirators should be worn.
- * A regulated, marked area should be established where Asbestos is handled, used, or stored.
- * Wear protective work clothing.
- * Wash thoroughly at the end of the workshift.
- * Post hazard and warning information in the work area. In addition, as part of an ongoing education and training effort, communicate all information on the health and safety hazards of Asbestos to potentially exposed workers.

In addition, the following controls are recommended:

- * Specific engineering controls are required for this chemical by OSHA. Refer to the OSHA Standard: 1910.1001 also refer to the NIOSH criteria document: Occupational Exposure to Asbestos #77-169.
- * Substitute the less toxic mineral wool and fiberglass for Asbestos where possible. Many other substitutes are also available.
- * There are extensive recommended and required engineering and procedural regulations for construction and repair projects involving Asbestos material. Before disturbing any Asbestos containing materials you must be properly trained and you must follow the required guidelines. Contact the NJ DOH for more information.

Good WORK PRACTICES can help to reduce hazardous exposures. The following work practices are recommended:

- * Workers whose clothing has been contaminated by Asbestos must change into clean clothing.
- * Do not take contaminated work clothes home. Family members could be exposed.
- * Contaminated, disposable work clothes should be disposed of with asbestos waste.
- * Wash any areas of the body that may have contacted Asbestos at the end of each work day, whether or not known skin contact has occurred.
- * Do not eat, smoke, or drink where Asbestos is handled, processed, or stored, since the chemical can be swallowed. Wash hands carefully before eating or smoking.
- * Ongoing Asbestos abatement projects in sealed areas, become very hot and humid. There is a risk of heat stress. You should be trained by your employer to recognize the warning signs and the proper action to take to avoid serious dangerous working conditions.
- * Do not dry sweep for clean-up. Use a vacuum or a wet method to reduce dust during clean-up.
- * When vacuuming, a high efficiency particulate absolute (HEPA) filter

should be used, not a standard shop vacuum.

PERSONAL PROTECTIVE EQUIPMENT

WORKPLACE CONTROLS ARE BETTER THAN PERSONAL PROTECTIVE EQUIPMENT. However, for some jobs (such as outside work, confined space entry, jobs done only once in a while, or jobs done while workplace controls are being installed), personal protective equipment may be appropriate.

The following recommendations are only guidelines and may not apply to every situation.

Clothing

- * Avoid skin contact with Asbestos. Wear disposable protective gloves and clothing. Safety equipment suppliers/manufacturers can provide recommendations on the most protective glove/clothing material for your operation.
- * All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.
- * TYVEK is recommended as a most effective material for protective disposable clothing.

Eye Protection

- * Eye protection is included in the recommended respiratory protection.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Such equipment should only be used if the employer has a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing, and medical exams, as described in OSHA 1910.134.

- * Asbestos is a known human carcinogen, therefore, for the absolute best protection, at any exposure level, use an MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in the positive pressure mode or with a full facepiece, hood, or helmet in the continuous flow mode, or use an MSHA/NIOSH approved self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode.

* However, during asbestos abatement projects when it is impossible to use supplied air or self-contained breathing apparatus, use a full facepiece powered air purifying respirator with high efficient particulate filters.

Q: Don't all chemicals cause cancer?

A: No. Most chemicals tested by scientists are not cancer-causing.

QUESTIONS AND ANSWERS

Q: If I have acute health effects, will I later get chronic health effects?

A: Not always. Most chronic (long-term) effects result from repeated exposures to a chemical.

Q: Can I get long-term effects without ever having short-term effects?

A: Yes, because long-term effects can occur from repeated exposures to a chemical at levels not high enough to make you immediately sick.

Q: What are my chances of getting sick when I have been exposed to chemicals?

A: The likelihood of becoming sick from chemicals is increased as the amount of exposure increases. This is determined by the length of time someone is exposed and the amount of material they are exposed to.

Q: When are higher exposures more likely?

A: Conditions which increase risk of exposure include dust releasing operations (grinding, mixing, blasting, dumping, etc.), other physical and mechanical processes (heating, pouring, spraying, spills and evaporation from large surface areas such as open containers) and "confined space" exposures (working inside vats, reactors, boilers, small rooms, etc.).

Q: Is the risk of getting sick higher for workers than for community residents?

A: Yes. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. However, people in the community may be exposed to contaminated water as well as to chemicals in the air over long periods. Because of this, and because of exposure of children or people who are already ill, community exposures may cause health problems.

The New Jersey State Department of Health, Occupational Disease Prevention and Information Program offers multiple services in occupational health. These include: Right to Know Information Resources, Public Presentations, General References, Industrial Hygiene Information, Surveys and Investigations, and Medical Evaluation. Consult another Fact Sheet for a more detailed description of these services or call (609) 984-1863.
