



A Union of Professionals

Health and Safety Program

AFT-PSRP

American Federation of Teachers – Paraprofessional and School Related Personnel

The Right to Know School Custodial Maintenance Workers



WORK
shouldn't
HURT

Everyday you use chemicals at school and on school grounds. Not all chemicals are dangerous. But some are. Good health is important to our families, the students in our schools and to us. Therefore, you and your co-workers need to know what dangers are associated with the chemicals you use.

Custodians can suffer several types of injuries because of dangerous chemical exposure. Six out of every 100 custodians have a lost-time injury every year due to chemical exposure. Forty percent (40%) of the injuries involve eye irritation or burns. Thirty- six (36%) involve skin irritation or burns and twelve percent involve breathing chemical fumes. Medical costs average \$375.00 per incident while lost time for the worker is estimated at \$240.00 per incident

Labor unions fought hard to make sure that all exposed workers had the “right to know” about the hazardous chemicals used on the job. The efforts of unions paid off with the adoption of the OSHA Hazard Communication Standard or “the Right to Know”. This fact sheet describes that standard and some of the hazards of chemicals you use everyday.

The Hazard Communication Standard in a Nutshell

States with OSHA state plan programs¹ give public employees including school employees the right to know what hazardous chemicals they could be exposed to by requiring employers to set up a “Hazard Communication Program” including:

- ❑ **Labels** on all hazardous materials
- ❑ **Material Safety Data Sheets (MSD’s)** for all hazardous chemicals
- ❑ **Training** all employees on the their rights under this standard when first employed and whenever a new chemical is introduced into the workplace; health effects of chemicals; how to read an MSDS and available controls and personal protective equipment

The Hazard Communication Standard (OSHA: 29 CFR 1910.1200) gives employees the right to know:

- ❑ Full ingredient information on all hazardous substances or products
- ❑ All known and suspected health hazards
- ❑ Proper control measures in place for these substances

¹ Alaska, Arizona, California, Connecticut, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Jersey, New Mexico, New York, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virgin Islands, Virginia, Washington.

MSD's must include:

1. product identity & ingredients
2. physical and chemical characteristics
3. fire and explosion hazards
4. reactivity information
5. health hazards; symptoms and routes of exposure
6. legal exposure limit (if any)
7. precautions for safe handling and use
8. protective control measures
9. personal protective equipment
10. emergency and first aid measures
11. spill and leak procedures

Training must include:

1. Physical and health effects of the hazardous substances
2. Methods used to detect the presence or release of hazardous chemicals
3. Measures employees can take to protect themselves from these hazards

Labels must include:

1. identity of the hazardous substance (same as an MSDS)
2. Specific hazard warnings about potential physical safety hazards and short term and long term health effects
3. Name and address of the chemical manufacturer

Chemicals – How are we exposed?

There are three ways that chemicals may enter or contaminate the body – these are often called “**routes of exposure or routes of entry**”.

Inhalation: We can breathe in gases, liquids in their vapor state and tiny particles such as dusts, mists and fumes. Once inhaled, these substances can irritate or damage your nose and respiratory tract. Very small particles may pass from our lungs into the bloodstream and cause damage to another part of the body.

Ingestion: It's hard to believe, but we can swallow dangerous chemicals when we smoke or eat with hands contaminated with toxic substances. We can also swallow dust that is too large to get into our lungs and finds its way back to the mouth.

Skin: Some substances enter through the skin in hazardous amounts. For example, paint thinners or gasoline can be absorbed through the skin and get into the blood stream. Some substances can't be absorbed but can do serious damage to the skin. Strong acids and bases are an example; they can burn or corrode the surface of the skin.

Exposure – How much is too much?

Chemicals vary in toxicity but the danger of the exposure is related to three factors – the **concentration** or amount, how often or **frequency** and length of time or **duration** of exposure. Acutely toxic chemicals can injure after a single exposure while other chemicals cause harm only after repeated exposures.

Extremely volatile chemicals evaporate rapidly into the air and therefore contaminate the air you breathe more easily than other chemicals. Corrosive or highly reactive chemicals are acutely toxic and will injure skin, respiratory passages or eyes immediately on contact. Always consult the MSDS for the physical characteristics of the chemicals that you use.

Health Effects of Exposure

Hazardous chemicals can cause local or system-wide reactions. Local reactions occur at the place where the exposure occurred – such as the skin, eyes or lungs. These local reactions are usually responsible for **acute** or immediate health effects. Examples include burns, irritation to eyes, nose and mucous membranes. They can also cause **chronic** or long-term health effects when exposure occurs over a long period of time. For instance, breathing dangerous asbestos may injure lungs and respiratory passages over long periods of time.

System-wide reactions occur when chemicals are able to get from the site of exposure into the blood stream (from the skin, lungs and GI tract). Not all chemicals can enter the bloodstream but those that can frequently travel to “target” organs such as the heart, liver and the brain and cause damage upon arrival. Systemic reactions can be immediate but are most often delayed. They may cause **chronic** or long-term health effects such as cancer, liver damage and nerve damage.

Caution: Many Custodial Products can be Dangerous!

Custodial workers use anywhere from 6- 50 different products, the range is great because some products are used infrequently or for special cleaning jobs. The highest risk products

are generally corrosive to the eyes and skin, flammable, give off toxic fumes and are poisonous.

Here are a few examples

Product	Health Effects
Acid Toilet Bowl Cleaner With Hydrochloric Acid	corrosive to eyes and skin can cause blindness
Metal Cleaner With perchloroethylene	damages liver, kidneys can cause cancer,
Carpet Spotter With perchloroethylene	same as above
General Purpose Cleaner With butoxyethanol, sodium hydroxide and ethanolamine	corrosive to eyes and skin flammable, poison
Floor Finish Stripper With butoxyethanol, sodium hydroxide and ethanolamine	same as above
Baseboard Stripper With butoxyethanol, sodium hydroxide and ethanolamine	same as above
Graffiti Remover With methylene chloride or Perchloroethylene	can cause cancer asphyxiation in spaces not well Ventilated - Methylene chloride becomes carbon monoxide in body
Glass Cleaner With butoxyethanol	flammable, poison
Disinfectant	corrosive to eyes

With Bleach, phenol, Quats
Or hydrogen peroxide

and skin; poisonous

Protecting Workers from Exposure

There are several ways to protect workers – some more effective than others. Here are a few tips:

1. Substitute safe or less toxic chemicals for toxic substances. Workers should be involved in evaluating and making those selections.
2. Eliminate storage of incompatible chemicals
3. Clean chemical spills immediately
4. Keep chemically soaked rags and other wastes in closed containers

Other Important Protective Measures – the Hierarchy of Controls

Best Method: Engineering controls such as good dilution ventilation where chemicals are used

Second Best Method: Administrative controls such as limiting the amount of time a person can work using the chemical or be exposed to the chemical and supplying eye wash stations and deluge showers. Also having separate eating and smoking facilities for workers.

Least Effective Method (but the one employers use the most): Personal Protective Equipment

Material Safety Data Sheets are supposed to tell you what kinds of protection to wear for safe handling of products but often they are vague. Try to use more than the MSDS as a resource for selecting personal protective equipment.

Gloves

All gloves are not created equal. To be effective they must provide protection against the specific hazards you face. Heavy duty chemical resistant gloves are the best for custodial work. Natural rubber is not suited for use with oils, grease and many organic solvents because the chemicals can be absorbed through the rubber and reach your skin. Find a size that fits and carefully monitor the gloves for tears or holes – discard when the gloves look worn. To

make gloves more comfortable, use a hand cream before putting the gloves on or use a cloth glove liner. Washing and airing gloves after use is important.

Goggles

Plastic wrap-around soft shell goggles are best for preventing chemical splashes. The soft edges fit closely to your face and prevent liquids from reaching your eyes. However, these goggles are uncomfortable and can fog up. To deal with these problems, use the softest rubber goggles you can find. Also get cleaning sprays that keep the lenses from fogging up badly (although nothing can keep lenses totally clear)

Impact goggles are meant primarily for protecting your eyes from flying objects. They provide some protection from splashed chemicals, but not as much as the wrap-around type. Because they are more comfortable and do not fog as badly, many people like these goggles better than the splash-proof kind.

Aprons

Using a plastic apron can be important when opening and mixing products. An apron is especially useful when handling concentrated chemicals that are being diluted with water.

Respirators

Respirators are special masks designed to provide clean air to workers in contaminated environments. They supply "pure" air in either of two ways: 1) they filter the work site air or 2) they supply clean outside air. Negative pressure respirators are commonly used because they are cheap. They work by suction when you inhale. When you inhale with this respirator the air will be forced to enter your mask and lungs through the filter cartridge on the respirator. As air passes through the filter cartridge it will be purified. If the respirator does not fit properly and snugly on your face, contaminated air will enter through the sides instead of the filter. It is important to choose the right type of filter cartridge for the job. For instance a dust cartridge will not protect you from organic or solvent vapors.

Respirators cannot be used for routine protection unless the school district puts in place a full respirator program as described in the OSHA Respiratory Protection Standard.