

1 Introduction

1.1 What Janitorial Products Do You Use?

1.2 How Much Of These Products Do You Use?

1.3 What Injuries Happen To Your Janitors?

1.4 How Accidents Happen

Today's Goals - At the end of the workshop you will know:

- How to identify janitorial products that pose a risk to your workers;
- The importance of wearing gloves and goggles for protection;
- How to find and test safer products; and
- How to reduce the amount of janitorial chemicals that you use - an idea that we call *pollution prevention*.

In This Section - The first step in reducing health risks from janitorial chemicals is to inventory the products that you use. This inventory should include any "left-over" products that have collected in trucks and closets.

It's also important to know how many injuries your people have with these chemicals.

Then you should ask yourself, "How do the injuries of my workers compare with what's happening in other organizations?"

Looking Ahead - In the next section we will go on to identify which of your products can harm your workers the most. These are the products to change first; the others can be shifted later.

1.1 What Janitorial Products Do You Use?

Typical Janitorial Products

Janitors use anywhere from 6 to 50 different products, although the higher number includes seldom-used chemicals kept on hand "just in case" for special cleaning jobs.

Tasks	How Often	Examples of Products Used:
Vacuum / dust mop floors	Daily	Dust Mop Spray
Wet mop floors	Daily to Weekly	Water or Cleaner
Strip & refinish floors	Quarterly to Yearly	Stripper, Rinse, & New Finish
Remove carpet spots	Daily to Weekly	Spot Remover
Wet-clean or shampoo carpets	Monthly to Yearly	Pre-spray, Shampoo, etc.
Clean restrooms	Daily	General Cleaner, Disinfectant, Bowl Cleaner
Clean windows	Quarterly to Infrequent	Glass Cleaner; Blind Cleaner
Clean furniture, display cabinets, etc.	Daily to Never	Upholstery Cleaner; Furniture Polish; Glass Cleaner
Other cleaning jobs	Upon Request	Metal Polish

How do you compare? List the Janitorial products that you use:

Tasks	What Products Do You Use?
Vacuum / dust mop floors	
Wet mop floors	
Strip & refinish floors	
Carpet spot removal	
Wet-clean or shampoo carpets	
Clean restrooms	
Toilets	
Showers	
Other	
Clean windows & mirrors	
Clean furniture, displays, etc.	
Other cleaning jobs	

1.2 How Much Do You Use?

The amounts of each chemical that a janitor uses vary according to the specific types of buildings being maintained. For example, hotels and airports often have extensive carpeted areas and busy public restrooms. Such buildings require more products for carpet and restroom maintenance than do offices or manufacturing plants.

Annual Product Usage - 1 Million Sq. Ft. Office

Work Area	Product Usually Bought As		Estimated Amounts Used Per Year (Gallons)	
	Concentrate	RTU	Typical*	Your Amount?
<u>Hard Floor Care</u>				
Sealer	x		50	
Finish	x		350-400	
Stripper	x		75-100	
Baseboard Stripper		x	5-10	
Maintenance Cleaner	x		100	
Dust Mop Spray		x	10-15	

Carpet Care

Pre-Spotter		x	10-15	
Traffic Lane Cleaner	x		50	
Shampoo	x		150	
Chewing Gum Remover		x	10-15	
Mildew Treatment	x		15	

Restroom Cleaning

Acid Bowl Cleaner		x	50-75	
Non-acid Bowl Cleaner		x	50-75	
Disinfectant Cleaner	x		200-250	
Metal Cleaner		x	50	
Glass Cleaner	x		100	
Spray Deodorizer		x	50	

* These are for a 1,000,000 sq. ft. office building that is half carpeted and half vinyl tile.

What chemical do you use the most of?

Which of your chemicals are the most expensive?

1.3 What Injuries Happen To Your Janitors?

What injuries do your janitors actually experience, and how much do these injuries cost you? Recent workers' compensation data show that out of every hundred janitors, six have lost-time injuries every year.

- 40% of these injuries involve eye irritation or burns;
- 36% involve skin irritation or burns; and
- 12% involve breathing chemical fumes.

How significant are these injuries? We found that each incident requiring medical treatment took the worker off of the job for an average of 18 hours. Medical costs averaged \$375 per claim, while lost time for the worker and his or her supervisor are estimated as \$240 per claim. That makes the total cost equal to \$615 per claim.

How Do Your Injuries Compare?

	Typical Contractor	Your Experience?
Number of Janitors	100	
Accidents Per Year	Up to 6 Accidents That Involve Lost Time	
<u>For Each Accident</u>		
Lost Time	18 hours per accident	
Cost For Janitor's Lost Time	18 hours \$180	
Supervisor Lost Time	4 hours \$60	
Medical Cost	\$375	
Cost Per Accident	\$615	
Cost Per Year For 6 Injured Janitors	\$3,690	

In addition, if your people have lots of accidents your workers' comp. premiums will go up.

1.4 How Accidents Happen

Thomas anxiously stood with his fellow workers as the foreman explained what tonight's work would be. The small basement room was unfamiliar to him and captured his attention. He found himself looking at the pipes overhead and at the shelves covering the wall next to him.

Thomas wondered at the confusing collection of bottles and cans filling these shelves. Why does anyone need so many chemicals? After all, we are only cleaning this place. He heard his name, and again paid attention to the foreman.

"You three new people will be cleaning the restrooms tonight", the foreman said. "Julio will be your lead and will show you what to do. We are short handed because some of our regular staff didn't show up. So you will have to hurry."

Julio gathered his crew and helped them select chemicals and equipment they would need from the shelves. He explained each item as he picked it up and placed it on the work cart. "Eye goggles and Rubber gloves", Julio said. "Wear them all the time when you are working. Here. Try the goggles on, and adjust the fit."

Thomas unwrapped the glasses and put them on his face. He didn't like the way they pinched his ears and kept sliding down his nose, so he took them off and put them in his pocket.

Next Julio placed several bottles onto the cart. "This blue one is for cleaning the mirrors. This yellow one is for the sinks. And this white one is for the toilets. Be careful - it can burn your skin. If you splash any on yourself, be sure to wash it off in the sink."

* * *

An hour later, Thomas was worrying that he would never figure out this job. His team members seemed to finish their share of the work much faster than he. They were always ready to move on while he still had more toilets to clean. I'll have to cut out some steps, do things quicker, he thought. These glasses are getting in my way and are slowing me down. I can move faster if I leave them off.

In the next restroom he put his plan into action. Taking the white bottle, he hurried from one stall to the next. He quickly poured some of the cleaner into each toilet, swirled his cleaning brush around the bowl, and moved on.

Thomas made it through four more restrooms before his luck ran out. The white bottle of bowl cleaner was almost empty, so he hurriedly poured all of what was left into the first toilet. Some of it splashed up into his face.

The next thirty seconds permanently changed his life.

What Happens During An Eye Injury

Elapsed Time	What Thomas Feels	What His Eyes Suffer
1 second	The first thing he feels is the wetness on his face.	The toilet bowl cleaner was 23% hydrochloric acid.
3 seconds	Then his eyes begin to sting.	The acid spreads over the eye surface.
5 seconds	He stands up blinking away the tears that are flowing from his eyes.	Corrosive burns begin on the eye surface, including underneath the lid.
7 seconds	The stinging quickly becomes pain. It seems that his eyes are on fire.	Permanent eye damage has begun.
10 seconds	Acting on reflex he hurrys to the nearby sink, thrusts his face under the tap, and turns the water on full.	The eye surface is being corroded away.
15 seconds	He quickly switches the water from side to side washing each eye in turn.	The water begins to wash away some of the acid, but the pH in the eye is still less than 1. The under side of the eyelid starts to burn.
20 seconds	But the pain continues to increase.	Nerve cells in the eyelid begin to die.
1 minute	His coworkers join him at that point drawn by Thomas' painful cries.	One third to one half of the acid has been washed out of the eyes.
20 minutes	They help Thomas wash out his eyes for 20 minutes, at which point his pain becomes almost bearable.	All of the acid has been washed out of Thomas' eyes. Pain still prevents him from opening his eyes.
1 hour	The crew then take him to the emergency room at a nearby hospital.	Thomas discovers that he has permanently lost 15% of his vision. He can no longer drive at night, and has trouble reading more than a few minutes at a time.