



Housekeeping Chemicals

Introduction

Housekeeping personnel, custodians, and other employees involved in cleaning are often exposed to a variety of chemicals. Wearing correct personal protective equipment, use of proper strength solutions, and good personal hygiene can minimize the hazards.

Problems, when they do occur, are often the result of failure to follow simple precautions. Many of the following suggestions require nothing more than following label directions. Employees need to be trained in the proper precautions when handling housekeeping chemicals. Monitoring work practices and periodic review of procedures by supervisory personnel will help ensure they are being followed.

Housekeeping chemicals need to be part of your hazard communication program. Such chemicals that are used infrequently or in small quantities are exceptions to the program requirements. See the Resources section at the end of this publication for more information on hazard communication programs and requirements.

The following will provide you with information on housekeeping chemicals, corrosives, mixing and diluting, warning labels, and potential health effects for misuse.

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This publication provides practical loss control and safety information to assist you in making your workplace safer. It is not legal advice. SAIF Corporation has made every effort to bring significant Oregon Occupational Safety and Health Administration (OR-OSHA) regulations to your attention. Nonetheless, compliance with OR-OSHA remains your responsibility. You should read and understand all relevant OR-OSHA regulations that apply to your job site(s). You may want to consult with your own attorney regarding aspects of OR-OSHA that may affect you.

Note: The information in this publication is time sensitive. Do not rely upon this document if its publication date is more than three years old. Please check the Employer Guide "Safety" section of our web site at www.saif.com/employer for a more recent, printable copy. You'll also find a variety of other valuable safety information designed to help your business prevent injuries and control costs.

Corrosives

Cleaning chemicals in concentrated solutions may present a corrosive hazard. Strong acids and alkalis can cause severe skin and eye burns.

Corrosive materials can be identified by a label on the original container. Generally speaking, strong alkalis (sodium hydroxide, potassium hydroxide, and calcium hydroxide) present a greater hazard to skin and eyes than strong acids (sulfuric acid, nitric acid, and hydrochloric acid). Strong alkalis will continue to penetrate tissue until they are washed away. Strong acids will tend to precipitate protein and form a barrier against deep penetration. Hydrofluoric acid is the one exception to this. It is commonly found in rust stain removers and will cause skin burns that may not be immediately painful. It will also continue to penetrate tissue until bone is reached. After thorough flushing with water, prompt medical attention is needed to prevent further penetration.

The proper first aid procedure for corrosives on skin or eyes is a complete flush with water. Eyes or skin should be flushed for at least 15 minutes. Medical attention is necessary. A face shield and/or chemical goggles as well as gloves should be worn when handling corrosives.

The availability of water is essential. Fixed mixing areas need plumbed eye wash fountains.

Mixing and Diluting

Cleaning chemicals should never be intermixed unless specified on the label. Some combinations of cleaners will release toxic gases and vapors that can result in severe or even fatal consequences. Chlorine bleach, for example, when mixed with acidic compounds will release toxic chlorine gas. Chlorine gas is a strong irritant and can result in serious lung injury. Chlorine bleach when mixed with household ammonia solutions will release compounds known as chloramines. The toxicity of chloramines is not completely established, but they are strongly irritating materials. Ammonia solutions mixed with strong alkalis such as sodium hydroxide will result in an increased release of ammonia gas.

Strong acids and alkalis should be diluted by adding them slowly to water. Adding water to strong acids and alkalis can cause splattering due to heat buildup. Splattering can also occur when strong acid drain cleaners are added to drains containing small amounts of water. Keep containers close together when pouring to help minimize the potential for splash or splatter.

Concentrated chemicals should be diluted according to label instructions. More concentrated solutions may or may not clean better, but they certainly pose a greater risk to the skin, eyes, lungs and overall health and safety of employees. Only well-trained employees should be allowed to dilute the materials.

Labels

Labels are important tools in ensuring that cleaners are used properly and not accidentally mixed. A good label should contain the name(s) of the hazardous ingredient(s), a statement calling attention to the type of hazard, precautions to be taken in the use of the material, and the name and address of the manufacturer. Most products are supplied with adequate labels. Those materials that are diluted and put into portable containers should also be properly labeled.

Material Safety Data Sheets (MSDSs)

Material Safety Data Sheets (MSDSs) are required to be available for all the chemicals used by your employees. The sheets give more detailed information about the hazards and various precautions and should be made available to your employees in the event of an emergency. Each employee needs to know how to read and use a MSDS. Please refer to the Resources section below for how to obtain additional information on MSDSs.

Skin Effects - Dermatitis

Dermatitis problems can arise from many different sources. The types of dermatitis can range from a simple contact irritant dermatitis due to the drying and chapping action of mild detergents or dilute alkali compounds, to allergic sensitivities, to depigmentation caused by phenolic disinfectants. Dermatitis claims can result in prolonged time loss. Individuals that develop allergic sensitivities may need to be removed from the work environment if product substitutions are not feasible.

Resources

Oregon OSHA

Hazard communication programs for housekeeping chemicals
<http://www.orosha.org/pdf/pubs/4802.pdf>

"Hazard Communication, A safe-work-practice guide"
<http://www.orosha.org/pdf/pubs/2034.pdf>