

Ansell



A CLEAN BILL OF HEALTH

THE IMPORTANCE OF THE RIGHT HAND PROTECTION IN CUSTODIAL AND JANITORIAL APPLICATIONS



Cleaning professionals, including custodial staff and janitors working in residential, commercial and industrial environments, are at constant risk of injury and illness because of routine exposure to dangerous chemical substances.

Employers are obliged to ensure a safe workplace that minimises present risks, so safety policy should;

- a stipulate the use of less hazardous chemical solutions (where possible);
- b ensure appropriate Personal Protective Equipment (PPE) is available and;
- c contain work instruction procedures designed to limit the likelihood of exposure through unnecessary handling.

Chemical hazards should be communicated to workers via clear labelling on cleaning fluid containers, the availability of material safety data sheets and development of a suitable training program.

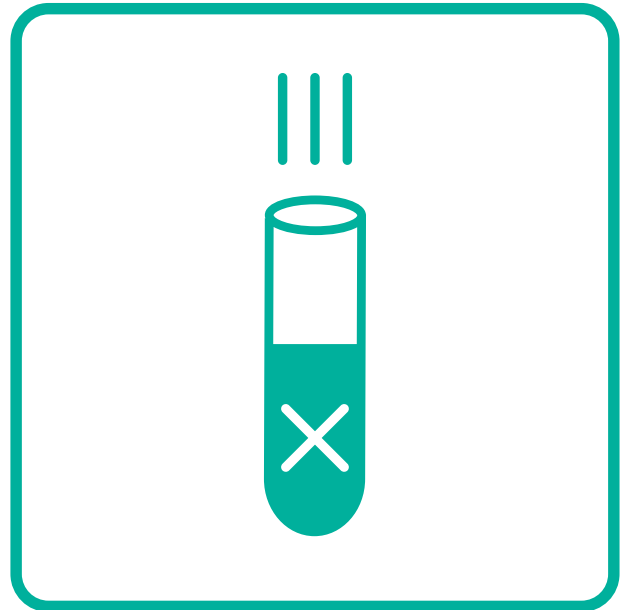
“ Employers are obliged to ensure a safe workplace ”

THE EFFECTS OF EXPOSURE

Chemical exposure in humans can lead to a wide range of health problems. There are three potential avenues for entry into the body; inhalation (breathing), absorption (via skin contact) and/or ingestion (eating) with the former two representing the most likely workplace risk.

Inhalation

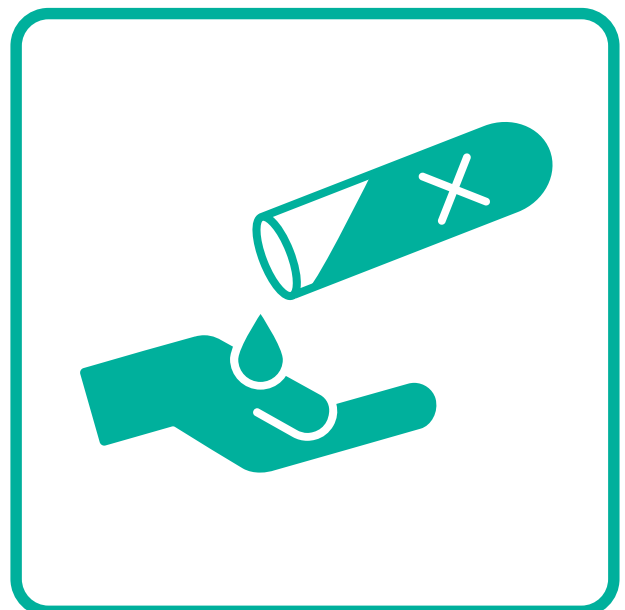
Inhalation of gaseous chemicals can lead to respiratory problems including wheezing, coughing, sore throat, asthma, internal chemical burn and mucous membrane damage, as well as additional problems like dizziness, nosebleeds, nausea, vomiting or diarrhoea. Even when not inhaled, external exposure to fumes can cause eye and skin irritations. The problem is worsened when cleaning products are mixed – combining bleach and ammonia, for example, can lead to severe lung damage and even death. If chemical mixing is required, doing so in a well-ventilated area will reduce the risk of noxious fume inhalation.



Absorption

Skin contact is also problematic, giving rise to allergic responses including dermatitis or rash, as well as chemical burn and cyanosis — a bluish discolouration caused by low oxygen levels in red blood cells.

The risk of chemical accidents can be greatly reduced using suitable PPE, including gloves that provide chemical resistance, along with safety goggles.



COMMON CLEANING AGENTS



“ Chemical cleaning products fall into four broad categories ”

- **Detergents;**
the most common group of cleaning chemicals. Detergents are used to remove dirt and grease, will generally clean the surface to which it is applied but not kill germs or bacteria found on that surface.
- **Sanitisers;**
chemicals that reduce bacterial contaminants. Sanitisers generally reduce contaminants on inanimate objects to safe levels (relative to public health), but do not necessarily eliminate microorganisms such as bacteria, viruses and moulds.
- **Disinfectants;**
contain chemicals that destroy or inactivate microorganisms that cause infection. These substances are critical for infection control in hospitals and healthcare settings.
- **Sterilising agents;**
are like disinfectants but used in specialised areas that demand sterile conditions, such as operating theatres. These products kill bacterial spores, viruses and germs that may be resistant to the chemicals found in disinfectants.

Each category includes various product types made from a diverse range of chemical compounds – each capable of causing undesirable health conditions. The following table outlines common products under each category and potential side effects from exposure.

COMMON PRODUCTS	POSSIBLE SIDE EFFECTS (via inhalation and/or absorption)
Detergents	
<ul style="list-style-type: none"> Dishwashing liquid Laundry detergent Glass cleaning spray 	<ul style="list-style-type: none"> Irritation of the eyes, throat and nose Skin irritation including rash and dermatitis
<ul style="list-style-type: none"> Oven cleaner Lye (metal hydroxide or strong alkali) Drain cleaner 	<ul style="list-style-type: none"> Chemical burns to both skin and lungs due to highly corrosive properties
<ul style="list-style-type: none"> Bathroom cleaner Soap scum and hard water deposit remover 	<ul style="list-style-type: none"> Chemical burns to both skin and lungs due to highly corrosive properties Skin irritation including rash and dermatitis These products are highly corrosive to surfaces including concrete, fabric and metals
<ul style="list-style-type: none"> Spot remover Carpet cleaner All-purpose cleaner 	<ul style="list-style-type: none"> Irritation of the eyes, throat and nose Skin irritation including rash and dermatitis These products are also highly flammable
Sanitisers	
<ul style="list-style-type: none"> Bleach Chlorine 	<ul style="list-style-type: none"> Skin irritation including rash and dermatitis Mucous membrane damage Irritation of the eyes, throat and nose Discolouration
Disinfectants	
<ul style="list-style-type: none"> Alcohol – including ethyl and isopropyl Disinfectant spray Surface wipes Hydrogen peroxide Iodine-based products (eg Betadine) 	<ul style="list-style-type: none"> Irritation of the eyes, throat and nose Burning eyes including lachrymation (tears) Coughing, wheezing and breathing problems Skin irritation including rash and dermatitis Chemical burns to both skin and lungs Alcohol-based disinfectants are also highly flammable
Sterilising agents	
<ul style="list-style-type: none"> Peracetic acid Glutaraldehyde Ethylene Oxide Ozone 	<ul style="list-style-type: none"> Irritation of the eyes, throat and nose Skin irritation including rash and dermatitis Coughing, wheezing, asthma and breathing problems Burning eyes including lachrymation (tears) Extreme discomfort and irritation to the upper respiratory tract Nausea, vomiting, diarrhoea and cyanosis

INSIST ON FIT-FOR-PURPOSE

Chemicals are easily absorbed through uncovered hands and some employers will issue workers with general purpose gloves, erroneously assuming they provide adequate protection. By taking too broad a view of the application and environment — and hoping to achieve economies of scale — safety and operational staff may inadvertently introduce significant risk. General purpose gloves are simply not an appropriate choice for janitorial work.

Given the potential severity of health risks, employers must ensure any hand protection used is not only appropriate for the task and environment, but also offers suitable defence against the *specific* chemicals in the cleaning products employed.

Gloves are manufactured in a wide range of materials, each liable to damage or failure by degradation, permeation of some chemical types and other environmental factors, such as temperature. Identifying the most apt option for each application is essential.

“ **Chemicals are easily absorbed through uncovered hands** ”

VETO THE VINYL

Vinyl protective gloves are commonly used in cleaning applications as they have gained a solid reputation as a low-cost, low-allergy alternative to natural latex rubber. While no single glove construction material can offer absolute protection against all chemical substances, vinyl is a particularly poor option for janitorial tasks.

Though it does offer reasonable resistance to abrasion, vinyl is susceptible to rips and tears, which exposes the wearer to risk of chemical contact and absorption.

The presence of plasticizers in vinyl glove construction can irritate the skin and delivers a less environmentally sound option. The material is also unlikely to hold its shape, given its inherent poor elasticity.

Importantly in the context of cleaning applications, vinyl degrades when in contact with certain substances, including fatty foods. It is not recommended for use with ketones (including automobile body polish and cleaners, tints and dyes, lubricating oils and surface cleaners) or organic solvents (including tetrachloroethylene used in dry cleaning fluids, toluene and turpentine found in paint thinners and acetone as commonly used in nail polish removers and glue solvents).



AN INFORMED CHOICE

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Best practice demands that a thorough risk assessment be undertaken prior to selection and purchase of hand protection solutions

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Best practice demands that a thorough risk assessment be undertaken prior to selection and purchase of hand protection solutions. Given the breadth of chemical hazards encountered in cleaning applications, risk assessment can be difficult. Consider using a service such as Ansell's Chemical Guardian, which identifies the optimum choice for the specific risks in a workplace based on a custom assessment of environmental conditions and hazards.

A personalised assessment of your specific workplace tasks and conditions will identify additional required features, such as textured grip to facilitate handling of tools and other equipment (particularly where liquids are commonly present).

Chemical exposure in the workplace is a serious threat, posing harmful — potentially lethal — outcomes. To effectively minimise unwanted outcomes, assessment must go beyond identification of general hazards associated with cleaning and isolate specific present chemical hazards, enabling a more informed glove selection process.

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