



Corrosives

Corrosives are powerful chemicals that are necessary for some jobs. Because you can't always avoid using them, you must be aware of how to protect yourself from their hazards.

Use the SDS

Before you use any corrosive product, read its safety data sheet (SDS). The SDS will tell you what is in the product. It will also tell you the product's health hazards and physical hazards. The SDS will outline recommendations for safe handling procedures, personal protective equipment, first aid procedures, and other important information.

What is a corrosive?

Corrosives are contained in common household products such as batteries or drain openers. They are also required for some of the operations in your workplace.

Corrosives can be liquids, powders, pellets, or gases. Most have a strong, irritating odor. Reactions involving corrosives can display spattering and create heat and fumes.

Corrosives can be either acids or bases. It is always important to read the container's label to identify a substance. There is another way to detect the presence of a corrosive. You can use a specially treated paper called litmus paper. Litmus paper turns red in the presence of an acid. It turns blue in the presence of a base. The pH scale denotes the strength of acids and bases, with a value of 7 being neutral.

- **pH = 1** = strong acid (red litmus paper)
- **pH = 7** = neutral
- **pH = 14** = strong base (blue litmus paper)

How can they hurt me?

Corrosives can cause irritation and chemical burns. They can also be poisonous.

Chemical Burns

Your skin and the mucous membranes of your eyes, nose, mouth, and respiratory tract are targets for irritation and burning from contact with corrosives.

What do you feel when you come into contact with a corrosive? Some corrosives, especially acids, will cause a burning, irritating sensation, and some may be very painful. But, some corrosives may not cause any immediate pain even though they are still causing damage. When a base comes in contact with your skin, you may feel a slippery sensation instead of a burning irritation. Battery acid is another example of a corrosive that may not cause immediate pain if it gets on your skin.

Breathing problems

Corrosive gases, fumes, or mists can irritate or burn the mucous membrane linings of the nose, throat, and respiratory tract. When this happens, the body produces fluids to try to protect the tissue. This can lead to a build-up of fluid in the lungs (pulmonary edema), a life-threatening condition.



Poisoning

Many corrosives are toxic. They can get into your system through inhalation, absorption through the skin, or ingestion. Overexposure to toxic or highly toxic corrosives requires medical attention and could lead to a life-threatening condition.

Know the physical hazards

Corrosives also have physical hazards that you need to be aware of. Corrosives can be:

1. Reactive -they can react violently with water or other substances. Some of these reactions can be violent, generate heat, cause explosions, or cause enough pressure build-up in a container to make it rupture.
2. Combustible or amammable-they can easily ignite and burn. Acetic acid is one example.
3. Reactive with metals-they can become explosive and produced highly-amammable hydrogen gas.
4. Oxidizers-they react when in contact with other chemicals creating oxygen. This greatly increases the amammability hazard. Oxidizers initiate or promote combustion in other materials. Nitric, chromic, and perchloric acids are examples of corrosives that are also oxidizers.