

Be Cautious with Sulfuric Acid

Sulfuric acid is widely used in the Life Science industry for a variety of purposes including Pharmaceutical Preparation and medical device component cleaning and etching. Sulfuric acid is also commonly found in most R&D and quality laboratories. Like all acids, it is reactive

If sulfuric acid comes in contact with any part of your body, rapid damage, including chemical burns, will occur. Burns also gives rise to the possibility of secondary problems such as infection. Burns should never be considered trivial.

The strength or concentration of sulfuric acid can vary. If transported in bulk quantities, the acid is usually "full strength." If used as a cleaning agent, it may be highly diluted. In both cases, the material is dangerous. In its concentrated form, sulfuric acid destroys not only the outer skin; it can also penetrate into the flesh under your skin, destroying it. This causes great pain and, if the damage is great enough, may result in shock, collapse or other problems which typically accompany thermal burns. Even dilute concentrations in contact with skin can cause dermatitis, or skin irritation. Prolonged breathing of the vapors or mists can cause respiratory disorders.

Protection: Sulfuric acid can burn through your skin into your flesh. It can cause your clothes to disintegrate. It can erode concrete and etch metal. Imagine what a drop or two would do to your sensitive and unprotected eyes. When working with or around Sulfuric acid, eye and face protection is a must. Safety glasses alone are not adequate. Wear chemical-type goggles (these have indirect vents), and a face shield. Protective clothing should include, at a minimum, an acid-resistant long apron and gloves. When working with large quantities, you will need to wear an acid-resistant "rain-suit" and high-top boots, with the pant leg extending over the top of the boot.

First Aid: Rapid treatment is very important. You must wash the acid off the body quickly. Get the victim to the emergency shower or to a hose as quickly as possible. Start washing and as you do so, remove all acid-wet clothing. Keep the water flowing. In cases where there are severe burns, shock may set in. If this occurs, treat for shock by placing victims on their back and keeping them warm. Call immediately for medical help. Do not apply any ointments, oils or other treatments to the burned area.

If acid is swallowed, it burns tissues all the way down to the stomach. Do not induce vomiting, which will cause additional burns as it comes up as well. Never give anything to an unconscious person but, if the victim is conscious, the acid should be immediately diluted. Provide milk, preferably mixed with egg whites. If this isn't available, give as much water to drink as possible.

Prevent contact with sulfuric acid! Pre-determine hazards in your operation and implement a prevention and treatment plan with professional assistance.

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