

SAFETY MEMO

January 17th, 2022 – Potassium Hydroxide (KOH) - CAS#1310-58-3



Did you know?

What is Potassium Hydroxide?

Potassium hydroxide, also known as potassium hydrate, lye, or caustic potash, is an odorless light yellow powder, most often found as a dilute solution for uses in food and drug applications.

Potassium hydroxide is an inorganic base, soluble in water. The pH of supplied concentrated potassium hydroxide solution for use in industry is typically 14, depending on the concentration.

Classified as corrosive, potassium hydroxide can cause skin burns and serious eye damage.

Where do we find it?

Potassium Hydroxide is often used in the following ways:

- CIP caustic cleaning solution.
- As a food additive for pH adjustment, stabilization, and a thickening agent.
- As a chemical reagent in pharmaceutical production.
- As a softener in soaps and cleansers.

How to protect yourself?

- Skin contact with potassium hydroxide should be avoided. Solvent-resistant gloves and clothing should be used when handling.
- Wear chemical safety goggles when handling.
- Hands should be washed thoroughly after handling.
- Local exhaust should be provided to mitigate inhalation. Approved respirators should be used if inhalation exposure is not preventable.

Why is it a hazard?

Due to the basic nature of potassium hydroxide, it can cause severe skin burns and serious eye damage. Additionally, potassium hydroxide is toxic if ingested and can be destructive to the mucous membrane tissue and upper respiratory tract if inhaled. The exposure limit (OSHA) is 2 mg/m³.



Design Considerations

Potassium hydroxide is incompatible with metals (including copper), acids, organic materials, and halogens. As with all corrosive chemicals, care should be taken to ensure sufficient material selection. Additionally, the solution should not be disposed of directly down the drain but should instead be neutralized to within an acceptable discharge limit or have a system in place for transfer to off site disposal. Eyewash stations and showers should be installed near areas of use and handling.

Here are some examples of typical mitigation and containment measures that can be implemented:

- Equipment Design (instrumentation, automation, detection devices)
- Primary and secondary containment (liquid tight construction, dikes, curbs, dedicated drainage system)