

Sodium Hypochlorite Incompatibility Chart

Do **NOT** mix Sodium Hypochlorite (bleach) with **ANY** other chemical unless adequate engineering controls and personal protective equipment (PPE) are in place. Accidental mixing may cause dangerous conditions that could result in injury to personnel and/or damage to property or the environment. Common locations where accidental mixing of incompatible chemicals can occur include, but are not limited to, containment systems and drains, sinks, unloading piping, and warehouse storage areas.

This is only a listing of the more common incompatible chemicals and is not an all-inclusive list. Contact your supplier or The Chlorine Institute for more information.

| Incompatible Material | Mixing <u>May</u> Result In |
|---|---|
| Acids and Acidic Compounds such as (Note 1): - Alum (Aluminum Sulfate) - Hydrofluoric Acid - Aluminum Chloride - Fluorosilicic Acid - Ferrous or Ferric Chloride - Phosphoric Acid - Ferrous or Ferric Sulfate - Brick and Concrete Cleaners - Nitric Acid - Chlorinated Solutions of Ferrous Sulfate - Hydrochloric Acid (HCl) - Sulfuric Acid | - Release of chlorine gas, may occur violently. |
| Chemicals and Cleaning Compounds containing ammonia such as (Note 1): - Ammonium Hydroxide - Quaternary Ammonium Salts (Quats) - Ammonium Chloride - Urea - Ammonium Silicofluoride - Ammonium Sulfate | - Formation of explosive compounds. - Release of chlorine or other noxious gases. |
| Organic Chemicals and Chemical Compounds such as (Note 1): - Fuels and Fuel Oils - Propane - Amines - Ethylene Glycol - Methanol - Insecticides Solvents and Solvent Based Cleaning Compounds - Organic Polymers | - Formation of chlorinated organic compounds. - Formation of explosive compounds - Release of chlorine gas, may occur violently |
| Metals such as: - Copper - Cobalt - Nickel - Iron - Vanadium - Molybdenum Avoid piping and material handling equipment containing stainless steel, aluminum, carbon steel, chrome steel, brass, bronze, Inconel®, Monel® or other metals. | - Release of oxygen gas, generally does not occur violently. Could cause overpressure/rupture of a closed system |
| Hydrogen Peroxide | - Release of oxygen gas, may occur violently |
| Reducing agents such as: - Sodium Sulfite - Sodium Hydrosulfite - Sodium Bisulfite - Sodium Thiosulfate | - Evolution of heat, may cause splashing or boiling. |
| Oxidizing agents such as: - Sodium Chlorite | - Release of chlorine dioxide, chlorine, and oxygen gas. Increased rate as pH is lowered. |
| Avoid direct contact with sunlight or UV light | - Release of oxygen gas, generally does not occur violently. Could cause overpressure/rupture of a closed system |

Notes
 1. Some of these compounds can be found in common household, automotive and industrial products such as window, drain, toilet bowl and surface cleaners, degreasers, antifreeze, water treatment or swimming pool chemicals. Consult product labels, product manufacturers, sodium hypochlorite suppliers or The Chlorine Institute for information.