

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 May Result In
Acids and Acidic Compounds such as (Note 1): - Alum (Aluminum Sulfate) - Aluminum Chloride - Ferrous or Ferric Chloride - Ferrous or Ferric Sulfate - Nitric Acid - Hydrochloric Acid (HCl) - Sulfuric Acid - Hydrofluoric Acid - Fluorosilicic Acid - Phosphoric Acid - Brick and Concrete Cleaners - Chlorinated Solutions of Ferrous Sulfate	- Release of chlorine gas, may occur
Chemicals and Cleaning Compounds containing ammonia such as (Note 1): - Ammonium Hydroxide - Ammonium Chloride - Ammonium Silicofluoride - Ammonium Sulfate - Quaternary Ammonium Salts (Quats) - Urea	- Formation of explosive compounds. - Release of chlorine or other noxious
Organic Chemicals and Chemical Compounds such as (Note 1): - Fuels and Fuel Oils - Amines - Methanol - Organic Polymers - Propane - Ethylene Glycol - Insecticides Solvents and Solvent Based Cleaning Compounds	- Formation of chlorinated organic compounds - Formation of explosive compounds - Release of chlorine gas, may occur
Metals such as: - Copper - Nickel - Vanadium - Cobalt - Iron - 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 Bisulfite - Sodium Hydrosulfite - 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.

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