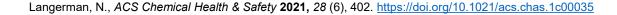


Sodium Chlorite



Case Study

"While preparing 10600 L of a 25% aqueous solution of sodium chlorite (NaClO₂), the solid salt was spilled and not cleaned up promptly. Combustible materials, including cardboard sheets and polypropylene fabric, became contaminated with solid sodium chlorite. Subsequently, a spark, initiated by inadvertently striking metal drum sealing rings together, ignited the oxidizer-contaminated combustible materials. The fire spread to a polypropylene bag containing 800 kg of sodium chlorite. The contents of the bag detonated causing one fatality, two serious injuries, and extensive property damage."





Working with Sodium Chlorite

Hazards:

- 1. Can cause irritation or burns to the skin and eyes, harmful if swallowed
- 2. Strong oxidizer, reacts with organics, (solid) reacts and ignite rapidly with combustible materials
- 3. (Solid) explosive in contact with chlorine, acid or acidic materials like alum

Handling Precautions

- 1. Do not get in eyes, on skin or on clothing, do not breath, taste or swallow
- Keep containers closed
- 3. Mix it into water, never add water into sodium chlorite
- 4. Remove and wash contaminated clothing to avoid fire

PPE Requirements

- 1. Chemical goggles, gloves and chemical-resistant suit
- 2. (If splashing or spraying is possible) Face shield
- 3. (If exposed to dust) NIOSH approved acid gas respirator with dust/mist pre-filters

Related First Aid

Contacted: take off contaminated clothing, wash contacted area with water for 15-20 minutes; call poison control center or doctor immediately

Swallowed: Drink water immediately if able to swallow; call poison control center or doctor immediately, do not induce vomiting unless told to do so

Inhaled: Move person to fresh air and monitor for respiratory distress. Call poison control center or doctor for advice. Call 911 or ambulance if person is not breathing.