MATERIAL SAFE DATA SHEET

【Product Name】 Sodium chlorate

【CAS】 7775-09-9

【Formula】 NaClO3

【Molecular Weight】 106.44

【EINECS】 231-887-4

【RTECS】 FO0525000

【RTECS Class】 Agricultural Chemical and Pesticide; Tumorigen; Mutagen; Human Data; Primary Irritant

Physical and Chemical Properties

【Appearance】 An odorless pale yellow to white crystalline solid.

【Solubility in water】 1000 g/L

【Melting Point】 260

【Boiling Point】 300

【Density】 2.498 g/cm3

【Usage】
Oxidizer in manufacture dyes, explosives & matches, dyeing & printing fabrics, tanning and finishing
leather, pharmaceutic aid (oxidizing agent).

**[Vapor Density]** 3.7

**[Odor threshold]** Odorless

**First Aid Measures**

**[Ingestion]**

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**[Inhalation]**

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**[Skin]**

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**[Eyes]**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Handling and Storage**

**[Storage]**

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Do not store near combustible materials. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from reducing agents.

**[Handling]**
Wash thoroughly after handling. Use only in a well ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Avoid ingestion and inhalation.

Hazard Identification

【Inhalation】
Causes respiratory tract irritation. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema.

【Skin】
Causes skin irritation. May cause severe irritation and possible burns.

【Eyes】
Causes eye irritation. May cause conjunctivitis. May cause permanent corneal opacification.

【Ingestion】
Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed. May cause burns to the gastrointestinal tract. May cause systemic effects by ingestion: blood hemolysis with or without anemia, methemoglobinemia-carboxyhemoglobinemia, and pulmonary changes. May cause damage to the red blood cells. May cause nausea, vomiting, and diarrhea, possibly with blood.

【Hazards】
Behavior in fire: Melts, then decomposes to give oxygen gas that increases the intensity of fire.

Exposure Controls/ Personal Protection

【Personal Protection】
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure.
【Respirators】

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

【Exposure Effects】

May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis, rapid heart rate, unconsciousness and possible death. Laboratory experiments have resulted in mutagenic effects. May cause kidney damage.

【Poison Class】

3

**Fire Fighting Measures**

【Flash Point】300

【Fire Fighting】

Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with combustible materials may cause a fire. Use water with caution and in flooding amounts. May accelerate burning if involved in a fire. Extinguishing media: Contact professional fire-fighters immediately. Cool containers with flooding quantities of water until well after fire is out. Use water fog only.

【Fire Potential】

Nonflammable. Decomposition is exothermic and can cause combustibles to ignite. Moderate hazard.

**Accidental Release Measures**

【Small spills/leaks】

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, using the appropriate protective equipment. Avoid generating dusty conditions. Remove all sources of ignition. Do not use combustible materials such as paper towels to clean up spill. Keep combustibles (wood, paper, oil, etc.,) away from spilled material.
Stability and Reactivity

【Incompatibilities】

Reducing agents, acids, alcohols, aluminum, amines, ammonia, phosphorus, steel, sulfuric acid, cyanides (e.g. potassium cyanide, sodium cyanide), sulfides (inorganic, e.g. ferric sulfide, lead sulfide, sodium sulfide), arsenic, carbon, arsenic trioxide, sodium phosphinate, charcoal, ammonium salts, metal powders, organic materials, thiocyanates, peat, saw dust, urotropine, thiuram, cyanoborane oligomer, alkenes + potassium osmate, aluminum + rubber, grease, leather, 1,3-bis (trichloromethylbenzene) + heat, ammonium sulfate, magnesium oxide, potassium cyanide.

【Stability】

Stable under normal temperatures and pressures.

【Decomposition】

Chlorine, irritating and toxic fumes and gases, oxygen, sodium oxide, chlorine dioxide, which may be spontaneously explosive.

【Combustion Products】

In fire situations oxygen may be liberated and increase the intensity of the fire.

Transport Information

【UN Number】1495

【Hazard Class】5.1

【Packing Group】II