

Product Safety Information

SODIUM TRIPOLYPHOSPHATE, ANHYDROUS

This Product Safety Information Sheet is principally directed to managerial, safety, hygiene and medical personnel. The description of physical, chemical and toxicological properties and handling advice is based on experimental results and past experience. It is intended as a starting point for the development of health and safety procedures.

Synonyms: Pentasodium triphosphate
Sodium triphosphate, anhydrous
Triphosphoric acid, sodium salt

CAS Number: 7758-29-4

I. PHYSICAL AND CHEMICAL PROPERTIES

Formula: $\text{Na}_5\text{P}_3\text{O}_{10}$

Molecular Weight: 367.86

Physical State: White granular or powdered solid

Bulk Density: 50-65 lbs/ft³

Melting Point: 1,224°F/662°C

Solubility: 13g/100g in water at 77°F/25°C

pH: 9.8 (1% aqueous solution)

II. CHEMICAL REACTIVITY

This material is alkali in nature and is not compatible with strong acids.

If used in tank cleaning applications this material, upon contact with certain food products or their residues which contain reducing sugars, may react to form deadly carbon monoxide gas. Proper tank entry and occupancy procedures should be observed. Monitor the tank atmosphere for the presence of carbon monoxide.

III. STABILITY

This material is thermally stable. It is hygroscopic (see Section XI).

IV. FIRE HAZARD

Under fire conditions, this material will not support combustion.

V. FIREFIGHTING TECHNIQUE

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate nonessential personnel from the fire area.

When there is a potential for exposure to smoke, fumes or products of combustion, firefighters should wear full-face, self-contained breathing apparatus and impervious clothing such as gloves, hoods, suits and rubber boots.

Use standard firefighting techniques in extinguishing fires

involving this material — use water, dry chemicals, foam, carbon dioxide or other suitable suffocation agents.

VI. TOXICOLOGY

WARNING: Causes irritation. Avoid contact with eyes, skin, and clothing.

Ingestion

The acute oral LD50 is 5010 mg/kg in male rats. A single oral dose of 4640 mg/kg produced decreased physical activity and 40 percent mortality in male rats.

Ingestion of large amounts may cause nausea, vomiting, cramps, and diarrhea. In severe cases, this may be followed by internal hemorrhage of the intestines.

Skin Contact

The acute dermal LD50 is greater than 4640 mg/kg in rabbits. A single dermal application of 4640 mg/kg did not produce signs of toxicity in rabbits. Local effects included moderate erythema.

Moderate irritant to rabbit skin following a 24-hour exposure. Prolonged or repeated skin contact with the crystalline material or concentrated aqueous solutions may cause local irritation.

Eye Contact

Irritant to rabbit eyes. Eye irritation may occur from contact with the solid material or concentrated aqueous solutions.

Inhalation

Inhalation of high airborne concentrations may cause non-specific irritation of the upper respiratory tract.

T-1715, T-4054

VII. FIRST AID

CALL A PHYSICIAN IMMEDIATELY

If a known exposure occurs or is suspected, immediately initiate the recommended procedures below. Simultaneously contact a Poison Control Center, a physician or the nearest hospital. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms, and follow the advice given. For additional information call collect, day or night, Stauffer Chemical Company (203) 226-6602 or Chemtrec (800) 424-9300. For CHEMTREC assistance when calling from Washington, D.C., Virgin Islands, Guam, Samoa, Puerto Rico or Alaska, call collect, day or night (202) 483-7616.

In case of suspected exposure, refer to the procedure and emergency contacts in Section VII — FIRST AID.

In case of spillage, refer to the procedure and emergency contacts in Section IX — SPILL HANDLING.

In case of suspected animal poisoning, call a veterinarian or call collect, day or night (203) 226-6602 (Stauffer Chemical Company) or (800) 424-9300 (CHEMTREC).

In case of contamination with other materials, call (800) 424-9300 (CHEMTREC).

NOTE: For CHEMTREC assistance when calling from Washington, D.C., Virgin Islands, Guam, Samoa, Puerto Rico or Alaska, call collect, day or night (202) 483-7616.



Ingestion

If swallowed — Immediately dilute the swallowed material by giving large quantities of water. Induce vomiting by gagging the victim with a blunt object placed on the back of the victim's tongue. Continue fluid administration until vomitus is clear. Do not induce vomiting or give anything by mouth to an unconscious person. Call a physician or the nearest Poison Control Center immediately.

Skin Contact

Immediately flush all affected areas with large amounts of water for at least 15 minutes while removing any contaminated clothing and shoes. Do not attempt to neutralize with chemical agents. Obtain medical advice immediately. Wash clothing before reuse.

Eye Contact

Flush the eyes with running water for 15 minutes. Hold the eyelids apart during the rinsing to ensure flushing of the entire surface of the eye and lids with water. Obtain medical attention if eye irritation occurs.

Inhalation

Remove from contaminated atmosphere. Seek medical attention if respiratory irritation or breathing difficulty occurs. If not breathing, give artificial respiration, preferably mouth-to-mouth. If the victim is having difficulty breathing, oxygen may be administered preferably with a physician's advice.

VIII. INDUSTRIAL HYGIENE

Ingestion

All food should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, hands and face should be thoroughly washed.

Skin Contact

Skin contact with dust or its aerosol should be prevented through the use of suitable protective clothing, gloves and footwear, selected with regard for use condition exposure potential.

Eye Contact

Eye contact with dust or its aerosol should be avoided through the use of chemical safety glasses, goggles or a face shield, selected with regard for use condition exposure potential.

Inhalation

If use conditions generate airborne dust or aerosol, the material should be handled in an open (e.g. outdoor) or well-

ventilated area. Where adequate ventilation is not available, NIOSH-approved respirators should be employed to reduce exposure. Respirator selection must address the potential for exposure under the use conditions.

Exposure Level Information

No exposure limit has been established for this material.

IX. SPILL HANDLING

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices (refer to Section VIII).

Spills can be handled routinely. Use adequate ventilation and wear a dust mask to prevent inhalation. Wear suitable protective clothing and eye protection to prevent skin and eye contact. Use the following procedures:

Sweep up the spilled material being careful not to create dust. Place sweepings into an appropriate chemical waste container. Seal container and dispose of in an approved landfill or in a manner that will not adversely affect the environment. Flush spill area with detergent and water to remove any residue.

IN CASE OF EMERGENCY, CALL, DAY OR NIGHT
(800) 424-9300 (CHEMTREC)
FROM WASHINGTON, D.C., VIRGIN ISLANDS, GUAM,
SAMOA, PUERTO RICO OR ALASKA, CALL COLLECT
DAY OR NIGHT
(202) 483-7616 (CHEMTREC)

X. CORROSIVITY TO MATERIALS OF CONSTRUCTION

This material is not corrosive to materials commonly used in the construction of process equipment, storage and shipping containers.

XI. STORAGE REQUIREMENTS

This material is hygroscopic and tends to cake slightly on storage. When not in use, containers should be kept closed at all times. Store in a cool, dry, well ventilated area. Exercise due caution to prevent damage to or leakage from the container.

XII. DISPOSAL OF UNUSED MATERIAL

Material that cannot be used or chemically reprocessed should be disposed of in an approved landfill or in a manner that will not adversely affect the environment.

XIII. DISPOSAL OF CONTAINER

Empty containers may be discarded with the general trash or incinerated by means which provide appropriate environmental pollution controls.