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### Section 1. Product and Company identification

Product Name: Sodium Tripolyphosphate Anhydrous

Trade names: Sodium Tripolyphosphate; STPP; STPP-GL; STPP-GM; STPP-GH; STPP-PL; STPP-PM; STPP-PH; STPP-HUPL; STPP-HUPM; STPP-HUPH; Hi-211; Hi-M-212; Hi-M-216S; Hi-M-217.

Synonyms: Pentasodium Triphosphate; Sodium Triphosphate; Triphosphoric acid; Pentasodium salt; STPP.

Fertilizer formula: Not applicable

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

Use of the substances: : Food processing- sequestrant, emulsifier, buffer, stabilizer, dispersant, texturizer, water holding agent.

Agriculture- with bentonite in irrigation practice.

Cosmetics – soaps, cleaners.

Industries – soap and synthetic detergents, ceramics and clay products, pulp and paper, water treatment, drilling mud.

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### Section 2. Composition/Information on Ingredients

Chemical name	CAS-No	EINECS-No	%	Classification
Sodium Tripolyphosphate	7758-29-4	231-838-7	100	R36/37/38


(See full text of R-phrases in chapter 16.)

### Section 3. Hazards Identification

**Physical State and Appearance** : White Solid (powder or granular).

**Emergency Overview:** Irritating to eyes, respiratory system and skin.

See Section 11 for Toxicological Data

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#### **Section 4. First - Aid Measures**

- Symptoms:** Causes irritation to the respiratory tract. Symptoms may include coughing and sneezing. Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Causes irritation to skin and eyes. Symptoms include dryness or cracking.
- Skin contact:** In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Cold water may be used. Get medical attention if irritation develops or persists. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.
- Eyes contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation develops or persists or if visual changes occur.
- Ingestion:** If victim conscious and alert, give 2-3 glasses of water to drink DO NOT INDUCE VOMITING. Do not give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.
- Inhalation:** If respiratory irritation or distress occurs, remove victim to fresh air. Get medical attention if respiratory irritation or distress continues.
- Notes to Physician:** No specific antidote, medical staff contacts Poisons Information Center. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Sodium phosphates have a hypothetical risk of hypernatremia and hypocalcemia, sodium, phosphate and calcium levels should be monitored.

#### **Section 5: Fire-Fighting Measures**


**Flammability of the product:** Not flammable.

**Hazardous Decomposition Materials (Under Fire) Conditions:** Not combustible Thermal decomposition products are dependent on temperature. Oxides of phosphorous, oxides of sodium.

**Fire Fighting Media and Instructions:** Use water spray, dry chemical, carbon dioxide or appropriate foam.

**Protective Clothing (Fire):** Fire Fighting should wear positive self-contained breathing apparatus (SCBA) and full turnout gear.

**Special Remarks on Explosion hazard:** Non-explosive.

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### **Section 6: Accidental Release Measures**

Wear protective clothing . Ventilate area of spill.

Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

Prevent the product from spreading into the environment.

### **Section 7: Handling and Storage**

Keep away from incompatible materials (see section 10).

#### Safety phrases

Avoid contact with skin and eyes.

Avoid breathing dust.

In case of contact with eyes, rise immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection.

In case of insufficient ventilation, wear suitable respiratory equipment.

#### Storage:

Stored in an area that is cool, dry, well ventilated, isolated from strong acids.

### **Section 8: Exposure Control / Personal Protection**

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**

Eyes: Safety glasses

Body: Long-sleeved clothing to minimize skin contact

Respiratory: Dust respirator. Be sure to use an approved/certified or equivalent.

Wear appropriate respirator when ventilation is inadequate.

Hands: Gloves.

Feet: Not applicable, (or working shoes).

**Personal Protection in :** Safety glasses. Full suit. Dust respirator. Boots. Gloves. A self-

**Case of Large Spill:** contained breathing apparatus should be used to avoid inhalation of the product

**Exposure Guidelines:** Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements.

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Threshold values:      ACGIH-TLV 10 mg/m<sup>3</sup> (TWA)\*  
                                 ACGIH-TLV 3 mg/m<sup>3</sup> (TWA)\*\*  
                                 OSHA-PEL 15 mg/m<sup>3</sup> (TWA)\*\*\*  
                                 OSHA-PEL 5 mg/m<sup>3</sup> TWA)\*\*

\*nuisance dust - inhalable particulate

\*\*nuisance dust - respirable particulate

\*\*\* total dust

### Section 9: Physical and Chemical Properties

General information:

Physical state: Solid (powder or granular)

Color: White

Odor: Odorless

Odor threshold: Odorless

Molecular weight: 367.86 g/mol

pH: 9.5-10.2 (Conc.(%w/w): 1) [Basic]

Boiling point : Not applicable

Flash point °C: Not applicable

Flammability: Not flammable

Explosive properties: Not explosive

Oxidizing properties: Not oxidizer

Vapor pressure: <0.001 kPa (<0.01 mm Hg) at 20°C (68°F)- Not Volatile

Relative Density: 2.6 g/cm<sup>3</sup>

Water solubility: 15 g/100g of water at 25°C (77°F)

Octanol/water partition coefficient: <1 the product is more soluble in water

Viscosity: Not Viscous

Vapor density: Not Volatile

Evaporation rate (butyl acetate=1): Not Volatile


VOC: Not an organic compounds

Apparent (Bulk) Density: 0.45-0.65 g/cm<sup>3</sup> – granular

0.70-0.90 g/cm<sup>3</sup> – powder

Decomposition range: > 630°C (1166°F)

Melting range : > 630°C (1166°F)

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### **Section 10: Stability and Reactivity**

Stability and Reactivity: The product is stable under normal handling and storage conditions described in Section 7.

Conditions to avoid: Extreme humidity, extreme heat.

Materials to avoid: Strong oxidizing agents, strong acids and moisture.

Hazardous Decomposition products: Under fire- oxides of phosphorous, oxides of sodium.

Hazardous polymerization: Will not occur.

### **Section 11: Toxicological Information**

#### **Potential Acute Health Effects on human:**

Eyes: Dusts have a dehydrating effect and may cause irritation at high concentration.

Skin: Prolonged contact with the dry material may cause dryness or cracking of the skin.

Inhalation: Dusts may cause coughing and sneezing.

Ingestion: Ingestion of large quantities may cause gastrointestinal irritation, vomiting and diarrhea.

#### **Potential Chronic Health Effects on human:**

Carcinogenic Effects: This product does not contain any substances that are considered by IARC, NTP, OSHA, EU or ACGIH to be "probable" or "suspected" human carcinogens.

Mutagenic Effects: Not applicable.


Teratogenic Effects: Not applicable.

**Medical Conditions Possibly Aggravated by Overexposure:** Inhalation of product may aggravate existing chronic respiratory disease.

#### **Toxicity Data:**

LD50 (Oral rat) 3,120 mg/kg

**Special Remarks on Toxicity to animals:** Very low toxicity for humans or animals.

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**Section 12: Ecological Information**

**Biodegradability:** No applicable, since inorganic substance.

**Substances which have an unfavorable influence on the oxygen balance and can be measured using parameters such as BOD, COD, etc.** : Absent.

**Degradability in sewage works:** Slow hydrolysis to orthophosphate form.

**Mobility:** Soluble in water.

**Persistence:** Not applicable, since inorganic substance.

**Substances, which contribute to eutrophication:** Phosphates, 57% as P<sub>2</sub>O<sub>5</sub>

**Toxicity Data:**

N/A


**Section 13: Disposal Considerations**

Waste Information: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

EPA Hazardous Waste: NO

**Section 14: Transport Information**

Regulatory Information	UN number	Proper shipping name	class	Packing group	Label	Additional information
DOT Classification	NOT regulated	-	-	-		-
IMDG class	NOT regulated	-	-	-		-
IATA-DGR class	NOT regulated	-	-	-		-

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**Section 15: Regulatory Information**

Labeling in accordance with EC directives: Xi



R-phrases:

R36/37/38 Irritating to eyes, respiratory system and skin.

S-phrases:

S24/25: Avoid contact with skin and eyes.

S22: Avoid breathing dust.

S26: In case of contact with eyes, rise immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S38: In case of insufficient ventilation, wear suitable respiratory equipment.

**Section 16: Other Information**

Full text of R-phrases with No. appearing in section 2:

R36/37/38 Irritating to eyes, respiratory system and skin.

**National Fire Protection Association Hazard Ratings- NFPA (R):**


- 1** Health Hazard Rating - Slight
- 0** Flammability Rating - Minimal
- 0** Instability Rating - Minimal

**National Paint & Coating Hazardous Materials Identification System – HMIS (R):**

- 1** Health Hazard Rating - Slight
- 0** Flammability Rating - Minimal
- 0** Instability Rating - Minimal

**Hazard Material Information System (U.S.A.):**

<b>Health</b>	<b>1</b>
<b>Fire Hazard</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal Protection</b>	<b>C</b>

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Key Legend Information:

ACGIH- American Conference of Governmental Industrial Hygienists

OSHA- Occupational Safety and Health Administration

TLV- Threshold Limit Value

PEL- Permissible Exposure Limit

TWA- Time Weighted Average

STEL- Short Time Exposure Limit

NTP- National Toxicology program

IARC- International Agency for Research on Cancer

ND- Not Determined

N/A- Not available

R-phrases- Risk phrases

S-phrases- Safety phrases

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