

**SAFETY DATA SHEET**

Haifa SAPP

Page 1 of 9

Complying with 1907/2006/EEC Regulation of 18 December 2006 ("REACH Regulation") and REGULATION (EC) No 1272/2008 (CLP)

**Section 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier****Product name:** Haifa SAPP**Trade names:** Sodium Acid Pyrophosphate; Haifa SAPP-Gr; Haifa SAPP-Pw; R-221; R-222; B-281; B-283; B-391; B-393; B-401; B-403.**Synonyms:** Disodium Diphosphate; Pyrophosphoric acid, disodium salt; Disodium Dihydrogen Pyrophosphate; SAPP; Sodium pyrophosphate;**Chemical formula:** H<sub>4</sub>O<sub>7</sub>P<sub>2</sub>.2Na**Fertilizer formula:** Not applicable**Product type:** Solid (powder or granular)**CAS number:** 7758-16-9**EC number:** 231-835-0**REACH registration no(s):** 01-2119489793-19**1.2 Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/preparation:** Food processing- leavening agent, sequestrant, emulsifier, buffer. Cosmetics- toothpastes, cleaners. Industries- metal treatment, textile, water treatment, drilling mud.**1.3 Details of the supplier of the safety data sheet****Supplier/Manufacturer:** Haifa Chemicals Ltd.

P.O.Box 15011, Matam- Haifa, 31905, Israel

Tel: 972-74-7373737

Fax: 972-74-7373733

E-mail: [Regulatory@haifa-group.com](mailto:Regulatory@haifa-group.com)**E-mail address of person responsible for this SDS:** [Regulatory@haifa-group.com](mailto:Regulatory@haifa-group.com)**1.4 Emergency telephone number****Emergency telephone number (with hours of operation):** +972-74-7373737

CHEMTREC (U.S.): 1-800-424-9300


**Section 2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****Classification in accordance to Regulation(EC) No. 1272/2008 (CLP/GHS)**

<b>Ingredient name</b>	<b>CLP/GHS Classification</b>
Sodium Acid Pyrophosphate	Eye Irrit.2 H319

**Classification according to Directive 67/548/EEC (DSD) or 1999/45/EC**

<b>Ingredient name</b>	<b>EU Classification</b>
Sodium Acid Pyrophosphate	Xi; R36

**See section 16 for full text of the R phrases or H statements declared above.****See section 11 for more detailed information on health effects and symptoms.**

<b>SAFETY DATA SHEET</b>	
Haifa SAPP	Page 2 of 9

## 2.2 Label elements

Labeling in accordance with Regulation 1272/2008 (CLP)

Hazard pictograms:



**Signal word:** Warning

**Hazard statements:**

H319: Causes serious eye irritation.

**Precautionary Statements:**

P264: Wash thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P337+313: Get medical advice/attention.

## 2.3 Other hazard

**Substance meets the criteria for BBT according to Regulation (EC) No. 1907/2006, Annex XIII:**

Not applicable

**Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII:**

Not applicable

**Other hazard which do not result in classification:**

Not applicable

## **Section 3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance/preparation:**

Product/ Ingredient name	Identifiers	%	EU Classification	CLP/GHS Classification
Sodium Acid Pyrophosphate	CAS number: 7758-16-9 EC number: 231-835-0 REACH: 01-2119489793-19	100	Xi; R36	Eye Irrit.2; H319

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in section 8.**

## **Section 4. FIRST AID MEASURES**

### 4.1 Description of first aid measures

**Eyes contact:** In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.

## SAFETY DATA SHEET



Haifa SAPP

Page 3 of 9

**Skin contact:** Avoid prolonged or repeated contact with skin. After handling, always wash hands thoroughly with soap and water. Get medical attention if irritation develops.

**Inhalation:** Avoid breathing dust. If inhaled, remove to fresh air.

**Ingestion:** If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

### **4.2 Most important symptoms and effects, both acute and delayed**

Dusts may cause upper respiratory tract irritation. Ingestion of large quantities may cause gastrointestinal irritation. Dusts may cause mild skin irritation. Dusts have a dehydrating effect and may cause irritation at high concentration

### **4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** No specific antidote, contact 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.

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

### **5.1 Extinguishing media**

Suitable: Use an extinguishing agent suitable for surrounding fire.

Not suitable: N/A

### **5.2 Special hazards arising from the substance or mixture**

Non-combustible.

Hazardous thermal decomposition products: Nitrogen oxides, metal oxide/oxides.

### **5.3 Advice for firefighters**

**Special protective equipment for fire fighters:** Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Remark:** Move containers from fire area if possible to do so without risk.

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

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing. Ventilate area of spill. Avoid contact with skin and eyes.

### **6.2 Environmental precautions**


Do not let this chemical enter the environment. Avoid contact of spilt material and runoff with soil and surface waterways.

### **6.3 Methods and materials for containment and cleaning up**

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

Large spill: As for small spill

**Personal Protection in Case of Large Spill:** Safety glasses. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.

<b>SAFETY DATA SHEET</b>	
Haifa SAPP	Page 4 of 9

#### **6.4 Reference to other sections**

See Sections 1 for emergency contact information.

See Section 8 for information on a appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

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

#### **7.1 Precautions for safe handling**

**Handling:** Minimize dust generation and accumulation. Do not breathe dust. Avoid contact with skin and eyes. Wash thoroughly after handling.

**Hygiene Measures:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures.

#### **7.2 Conditions for safe storage, including any incompatibilities**

**Storage:** Keep containers tightly closed, in a dry, cool and well ventilated place. Protect from humidity. Do not store together with strong bases and strong oxidizing agents. Keep away from heat, sparks and open flame. Use original container.

**7.3 Specific end use(s):** N/A

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

#### **8.1 Control parameters**

##### **Occupational exposure limit values:**

<b>Ingredient name</b>	<b>Occupational exposure limits</b>
Sodium Acid Pyrophosphate	ACGIH-TLV 10 mg/m <sup>3</sup> (TWA), nuisance dust - inhalable particulate ACGIH-TLV 3 mg/m <sup>3</sup> (TWA), nuisance dust - respirable particulate OSHA-PEL 15 mg/m <sup>3</sup> (TWA), total dust OSHA-PEL 5 mg/m <sup>3</sup> (TWA), nuisance dust - respirable particulate

##### **Derived effects levels:**

Recommended occupational and consumer exposure limit values (following from the preformed CSA):

<b>Exposure pattern</b>	<b>Derived No Effect Level (DNEL)</b>	
	<b>Workers</b>	<b>General population</b>
Oral	N/A	N/A
Dermal	N/A	N/A
Inhalation	2.79 mg/m <sup>3</sup>	0.68 mg/m <sup>3</sup>

#### **8.2 Exposure controls**

##### **Engineering Measures**

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

##### **Person Protective measures**

## SAFETY DATA SHEET



Haifa SAPP

Page 5 of 9

Respiratory protection: Disposable particulate mask. Be sure to use an approved/certified or equivalent equipment. Wear appropriate respirator when ventilation is inadequate.

Hand protection: Wear protective disposable vinyl gloves to prevent skin exposure.

Eye protection: Wear protective safety glasses.

Skin protection: Wear appropriate long-sleeved clothing to minimize skin contact.

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Section 9: Physical and Chemical Properties

#### 9.1 Information on basic physical and chemical properties

Appearance: Solid (powder or crystalline), White

Odour: Odourless

Odour threshold: Odourless

pH:  $\geq 3.8$  -  $\leq 3.9$

Melting point/Freezing point: 450°C

Initial boiling point/boiling range: Not applicable

Flash point: Not applicable

Evaporation rate: Not volatile (butyl acetate=1)

Flammability: Not flammable

Upper/lower flammability or explosive limits: N/A

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

Vapor density: Not volatile

Relative Density: 2.63 g/cm<sup>3</sup> at 22.5°C

Solubility(ies): Water solubility- 170 g/L at 20°C

Partition coefficient Octanol/Water:  $< 1$ , the product is more soluble in water

Auto-ignition temperature: Not applicable

Decomposition temperature: 220°C

Viscosity: Not viscous

Explosive properties: Not explosive

Oxidizing properties: Not oxidizer

#### 9.2 Other information:

Molecular weight: 222-224 g/mol

Specific gravity: 1.77 at 3.98°C

VOC: Not an organic compounds

Apparent (Bulk) Density: 0.7-1.0 g/cm<sup>3</sup>

Mass median diameter:  $> 4.61 - 4.87$   $\mu\text{m}$

### Section 10: Stability and Reactivity

#### 10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients


#### 10.2 Chemical stability

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

#### 10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

#### 10.4 Conditions to avoid

<b>SAFETY DATA SHEET</b>	
Haifa SAPP	Page 6 of 9

Extreme humidity, excess heat.

**10.5 Incompatible materials**

Strong oxidizing agents, strong bases and moisture.

**10.6 Hazardous Decomposition products:**

Under fire- oxides of phosphorous, oxides of sodium.

**Section 11: Toxicological Information**

**11.1 Information on toxicological effects**

**Acute toxicity:**

Product/ingredient name	Test	Species	Dose
Sodium Acid Pyrophosphate	LD50, Oral	Rat	3600 mg/kg
	LD50, Oral	Rat	1.8 g/kg (male)
	LC50, Inhalation	Rat	> 0.58 mg/L air, 4h
	LD50, Dermal	Rat	>2000 mg/kg

**Skin corrosion/irritation:** Not irritating.

**Serious eye damage/irritation:** Irritating to eyes.

**Respiratory or skin sensitization:** Not sensitizing.

**Germ cell mutagenicity:**

Negative In vitro mutagenicity and genotoxicity evidence suggests a low potential for germ cell mutagenicity. The following studies have been conducted on Na, and K pyrophosphates: Bacterial Reverse Mutation Assay; AMES (OECD 471) and In vitro cytogenicity study in mammalian cells (OECD 473). Whilst these studies look specifically at the effects in somatic cell lines the results are still relevant to the potential of the test material to induce mutagenicity in germ cell lines.

Negative in vivo genotoxicity data.

**Carcinogenicity:** This product does not contain any substances that are considered by IARC, NTP, OSHA, EU or ACGIH to be “probable” or “suspected” human carcinogens.


**Reproductive toxicity:**

Four key studies (One study report, four different test animals) are available to assess the teratogenic potential of disodium dihydrogenpyrophosphate (Morgariedge, 1973) in mice, rats, hamsters and rabbits. This study is considered to be adequate to fulfil this endpoint. In addition supporting data on the analogous substance tetrasodium pyrophosphate is provided to support a lack of developmental toxicity potential for sodium and potassium pyrophosphates.

**Specific target organ toxicity (single exposure):** N/A

**Specific target organ toxicity (repeated exposure):** N/A

**Aspiration hazard:** N/A

<b>SAFETY DATA SHEET</b>	
<b>Haifa SAPP</b>	Page 7 of 9

#### **Other effects**

Inhalation: Dusts may cause upper respiratory tract irritation. May cause coughing and sneezing. Inhalation of product may aggravate existing chronic respiratory disease.

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

Skin contact: Dusts may cause mild skin irritation. May cause dryness or cracking. Prolonged contact with the dry powder may cause drying or chapping of the skin.

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

### **Section 12: Ecological Information**

#### **12.1 Toxicity**

Substance name	Toxicity to fish	Toxicity to crustaceans	Toxicity to algae
Sodium acidpyrophosphate	LC50 (96 h): > 100 mg/L	EC50 (48 h): > 100 mg/L	EC50 (72 h): > 100 mg/L

#### **Predicted effect concentrations:**

Product/ Ingredient name	Type	Compartment Detail	Value	Method Detail
Sodium acidpyrophosphate	PNEC	Fresh water	0.05 mg/l	Assessment Factors
	PNEC	Marine	0.005 mg/l	Assessment Factors

#### **12.2 Persistence and Degradability**

Not applicable, since inorganic substance.

#### **12.3 Bioaccumulative potential**

Disodium dihydrogenpyrophosphate is hydrolysed to orthophosphate in aqueous and biological systems. The degradation products of disodium dihydrogenpyrophosphate are essential nutrients (food elements) for plants, and stimulate the growth of water plants (macrophytes) and/or algae (phytoplankton) and are ubiquitous in the environment. The potential for bioaccumulation is therefore considered to be minimal.

#### **12.4 Mobility in soil**

Soil/water partition coefficient (Koc) : N/A

**Mobility:** Soluble in water.

#### **12.5 Results of PBT and vPvB assessment**


Not applicable

#### **12.6 Other adverse effects**

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

Substances, which contribute to eutrophication: Phosphates, 54.3-61.6% as P<sub>2</sub>O<sub>5</sub>

### **Section 13: Disposal Considerations**

<b>SAFETY DATA SHEET</b>	
Haifa SAPP	Page 8 of 9

### **13.1 Waste treatment methods**

**Provisions relating to waste:** Directive 2008/98/EC on waste, of 19 November, 2008: Depending on branch of industry and production process, also other EURAL codes may be applicable  
06 03 14: solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

### **Product**

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

**Hazardous waste:** N/A

### **Packing**

Empty containers should be taken for local recycling, recovery or waste disposal.

## **Section 14: Transport Information**

### **14.1 Un number**

ADR/RID: -

IMDG: -

IATA: -

### **14.2 Proper shipping name**

ADR/RID: Not regulated

IMDG: Not regulated

IATA: Not regulated

### **14.3 Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA: -

### **14.4 Packing group**

ADR/RID: -

IMDG: -

IATA: -

### **14.5 Environmental hazard**

Marine Pollutant: Not known

### **14.6 Special precautions for user**

Not available

### **14.7 Transport to bulk according to Annex II of MARPOL 79/78 and the IBC Code**

Not available

## **Section 15: Regulatory Information**

### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**


EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use

EU Regulation(EC) No.1907/2006 (REACH), No 1272/2008 (CLP)

### **15.2 Chemical safety assessment**

In accordance with REACH article 14, a Chemical Safety Assessment has been carried out for this substance.



<b>SAFETY DATA SHEET</b>	
Haifa SAPP	Page 9 of 9

### **Section 16: Other Information**

**Full text of R-phrases referred to in section 3:**

Xi-irritant

R36: Irritating to eyes

**Full text of Hazards Statements referred to in sections 3:**

Eye Irrit.- Serious eye irritation

H319: Causes serious eye irritation.

**Training advice:** Before using/handling the product one must read carefully present MSDS.

**Recommended restriction:** N/A

Key Legend Information:

ACGIH- American Conference of Governmental Industrial Hygienists

OSHA- Occupational Safety and Health Administration

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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