

## SAFETY DATA SHEET

Preparation Date: 8/1/2018

Revision Date: Not Applicable

Revision Number: Not Applicable

### 1. IDENTIFICATION

#### Product identifier

**Product code:** P3018  
**Product Name:** PHOSPHO(ENOL)PYRUVATE TRISODIUM SALT, HYDRATE

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** Mixture  
**RTECS #** Not available  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 3

#### Label elements

##### **Warning**

**Hazard statements**  
 Causes skin irritation  
 Causes eye irritation  
 May cause respiratory irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear protective gloves

**Precautionary Statements - Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	100

**4. FIRST AID MEASURES****First aid measures**

**General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

**Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

**Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

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

**Symptoms** Causes eye irritation

**Product code:** P3018

**Product name:**  
PHOSPHO(ENOL)PYRUVATE  
TRISODIUM SALT, HYDRATE

2 / 11

Mild eye irritation  
Eye contact may result in redness or pain  
Causes skin irritation  
Skin contact may result in redness, pain, inflammation, itching, scaling  
Irritating to respiratory system

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

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:** Carbon Monoxide, Carbon Dioxide. Sodium Oxides. Oxides of phosphorus.

**Specific hazards:** May be combustible at high temperatures.

**Special Protective Actions for Firefighters**

**Specific Methods:** No information available.

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**6. ACCIDENTAL RELEASE MEASURES**

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

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE**

**Product code:** P3018

**Product name:**  
PHOSPHO(ENOL)PYRUVATE  
TRISODIUM SALT, HYDRATE

**3 / 11**

## Precautions for safe handling

### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

## Conditions for safe storage, including any incompatibilities

### **Technical Measures/Storage Conditions:**

Keep containers tightly closed in a cool, well-ventilated place. Freeze. Store at -20 °C (-25 °C to -10 °C). Store away from incompatible materials.

### **Incompatible Materials:**

Strong oxidizing agents

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	None	None	None	None

##### **Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	None	None	None	None

##### **Australia and Mexico**

Components	CAS-No.	Australia	Mexico
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	None	None

### Appropriate engineering controls

#### **Engineering measures to reduce exposure:**

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other 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.

### Individual protection measures, such as personal protective equipment

#### **Personal Protective Equipment**

**Product code:** P3018

**Product name:**  
PHOSPHO(ENOL)PYRUVATE  
TRISODIUM SALT, HYDRATE

**4 / 11**

<b>Eye protection:</b>	Safety glasses with side-shields or Goggles
<b>Skin and body protection:</b>	Chemical resistant apron Long sleeved clothing Gloves
<b>Respiratory protection:</b>	Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
<b>Hygiene measures:</b>	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid	<b>Appearance:</b> Crystals. Crystalline powder.	<b>Color:</b> White. Off-white.
<b>Odor:</b> No information available.	<b>Taste</b> No information available.	<b>Formula:</b> C3H2O6PNa3 + xH2O
<b>Molecular/Formula weight (g/mole):</b> 233.99 + xH2O	<b>Flammability:</b> No information available	<b>Flashpoint (°C/°F):</b> No information available.
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> No information available	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> No information available	<b>pH:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> No information available	

## 10. STABILITY AND REACTIVITY

**Reactivity**  
No information available

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Product code:** P3018

**Product name:**  
PHOSPHO(ENOL)PYRUVATE  
TRISODIUM SALT, HYDRATE

5 / 11

**Conditions to avoid:** Heat. Avoid dust formation. Incompatible materials.

**Incompatible Materials:** Strong oxidizing agents

**Hazardous decomposition products:** No information available.

**Other Information**  
**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Ingestion. Inhalation.

### Acute Toxicity

#### Component Information

Phospho(enol)pyruvate Trisodium Salt, Hydrate	
CAS-No.	5541-93-5

CAS-No.	5541-93-5
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LD50/oral/rat = No information available  
LD50/oral/mouse = No information available  
LD50/dermal/rabbit = No information available  
LD50/dermal/rat = No information available  
LC50/inhalation/rat = No information available  
LC50/inhalation/mouse = No information available  
Other LD50 or LC50 information = No information available

#### Product Information

LD50/oral/rat =  
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =  
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit  
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat  
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat  
VALUE-Vapor = No information available  
VALUE-Gas = No information available  
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse  
VALUE-Vapor = No information available

**Product code:** P3018

**Product name:**  
PHOSPHO(ENOL)PYRUVATE  
TRISODIUM SALT, HYDRATE

6 / 11

VALUE - Gas = No information available  
VALUE - Dust/Mist = No information available

### Symptoms

**Skin Contact:** Causes skin irritation.  
**Eye Contact:** Causes eye irritation. Mild eye irritation.  
**Inhalation** Irritating to respiratory system.  
**Ingestion** Health injuries are not known or expected under normal use.  
**Aspiration hazard** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** No information available.  
**Sensitization:** No information available.  
**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

### Specific Target Organ Toxicity

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects:** No data available.

**Product code:** P3018

**Product name:**  
PHOSPHO(ENOL)PYRUVATE  
TRISODIUM SALT, HYDRATE

7 / 11

**Persistence and degradability:** No information available  
**Bioaccumulative potential:** No information available.  
**Mobility:** No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

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

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	None	None	None	None

### 14. TRANSPORT INFORMATION

**DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Class:** No information available  
**Packing group:** No information available  
**Emergency Response Guide Number:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** No Information available  
**Symbol(s):** No information available  
**Description:** No information available

**TDG (Canada)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant:** No Information available  
**Description:** No information available

**ADR**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available

**IMO / IMDG**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available

**Product code:** P3018

**Product name:**  
 PHOSPHO(ENOL)PYRUVATE  
 TRISODIUM SALT, HYDRATE



**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant:** No information available

**RID**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**ICAO**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**IATA**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**ERG Code:** No information available  
**Special Provisions:** No information available

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	Present	Not present	Not present	Not present	Not present	Not present	Present 226-906-8

**U.S. Regulations**

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable	Section 302 Extremely Hazardous Substances	Section 302 Extremely Hazardous Substances and	Section 313 - Chemical Category	Section 313 - Reporting de minimis

**Product code:** P3018

**Product name:**  
 PHOSPHO(ENOL)PYRUVATE  
 TRISODIUM SALT, HYDRATE

		Quantities	and TPQs	RQs		
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	None	None	None	None	None

## U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: The WHMIS 2015 classification of this product has not been validated or reviewed yet.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

**WHMIS 1988 Hazard Class**  
Non-controlled

### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

### Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	Not Listed	Present

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5	

### EU - CLP (1272/2008)

### R-phrase(s)

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

### S -phrase(s)

S37 - Wear suitable gloves.

S39 - Wear eye/face protection.

**Product code:** P3018

**Product name:**  
PHOSPHO(ENOL)PYRUVATE  
TRISODIUM SALT, HYDRATE

10 / 11

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Phospho(enol)pyruvate Trisodium Salt, Hydrate	5541-93-5		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

Xi - Irritant.

**16. OTHER INFORMATION**

**Preparation Date:** 8/1/2018  
**Revision Date:** Not Applicable  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**