

## SAFETY DATA SHEET

Revision Date 19-Jan-2018

Revision Number 3

### 1. Identification

**Product Name** Tetrakis(triphenyl phosphite)nickel(0)  
**Cat No. :** AC347760000; AC347760010; AC347760050  
**Synonyms** No information available  
**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

##### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

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

|  |            |
|--|------------|
| Skin Corrosion/irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 2 |
| Respiratory Sensitization                        | Category 1 |
| Skin Sensitization                               | Category 1 |
| Carcinogenicity                                  | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Causes skin irritation  
Causes serious eye irritation  
May cause an allergic skin reaction  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause respiratory irritation  
Suspected of causing cancer

**Precautionary Statements****Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Avoid breathing dust/fume/gas/mist/vapors/spray  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Use only outdoors or in a well-ventilated area  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse  
If skin irritation or rash occurs: Get medical advice/attention

**Eyes**

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

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

**WARNING.** Cancer - <https://www.p65warnings.ca.gov/>.

### 3. Composition/Information on Ingredients

| Component  | CAS-No     | Weight % |
|--|------------|----------|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- | 14221-00-2 | 95       |

### 4. First-aid measures

|                     |   |
|---------------------|---|
| <b>Eye Contact</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.                 |
| <b>Skin Contact</b> | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention. |
| <b>Inhalation</b>   | Remove from exposure, lie down. Move to fresh air. If not breathing, give artificial respiration. Obtain medical attention.     |
| <b>Ingestion</b>    | Clean mouth with water. Get medical attention.  |

**Most important symptoms and effects**

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Breathing difficulties. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Notes to Physician**

Treat symptomatically

## 5. Fire-fighting measures

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

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available  
**Method -** No information available

**Autoignition Temperature** Not applicable

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Explosive properties.

**Hazardous Combustion Products**

Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>) Oxides of phosphorus Burning produces obnoxious and toxic fumes Nickel oxides.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

**Health**  
2

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment.

**Environmental Precautions** See Section 12 for additional ecological information. Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal.

## 7. Handling and storage

**Handling** Avoid contact with skin and eyes. Do not breathe dust. Use only in area provided with appropriate exhaust ventilation.

**Storage** Keep container tightly closed. Keep under nitrogen. Keep refrigerated.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component  | ACGIH TLV | OSHA PEL   | NIOSH IDLH   | Mexico OEL (TWA)  |
|--|-----------|--|--|---|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- |           | (Vacated) TWA: 0.1 mg/m <sup>3</sup><br>(Vacated) TWA: 1 mg/m <sup>3</sup> | IDLH: 10 mg/m <sup>3</sup><br>TWA: 0.015 mg/m <sup>3</sup> | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.3 mg/m <sup>3</sup> |

Legend

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal Protective Equipment

**Eye/face Protection** 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 and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|   |   |
|---|---|
| <b>Physical State</b>                         | Powder Solid  |
| <b>Appearance</b>                             | Off-white   |
| <b>Odor</b>                                   | No information available  |
| <b>Odor Threshold</b>                         | No information available  |
| <b>pH</b>                                     | No information available  |
| <b>Melting Point/Range</b>                    | 145 °C / 293 °F   |
| <b>Boiling Point/Range</b>                    | No information available  |
| <b>Flash Point</b>                            | No information available  |
| <b>Evaporation Rate</b>                       | Not applicable  |
| <b>Flammability (solid,gas)</b>               | No information available  |
| <b>Flammability or explosive limits</b>       |   |
| Upper   | No data available   |
| Lower   | No data available   |
| <b>Vapor Pressure</b>                         | No information available  |
| <b>Vapor Density</b>                          | Not applicable  |
| <b>Specific Gravity</b>                       | No information available  |
| <b>Solubility</b>                             | No information available  |
| <b>Partition coefficient; n-octanol/water</b> | No data available   |
| <b>Autoignition Temperature</b>               | Not applicable  |
| <b>Decomposition Temperature</b>              | No information available  |
| <b>Viscosity</b>                              | Not applicable  |
| <b>Molecular Formula</b>                      | C <sub>72</sub> H <sub>60</sub> Ni O <sub>12</sub> P <sub>4</sub> |
| <b>Molecular Weight</b>                       | 1299.83   |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | None known, based on information available   |
| <b>Stability</b>                        | Air sensitive.   |
| <b>Conditions to Avoid</b>              | Exposure to air. Incompatible products.  |
| <b>Incompatible Materials</b>           | Strong oxidizing agents  |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Oxides of phosphorus, Burning produces obnoxious and toxic fumes, Nickel oxides |

**Hazardous Polymerization** No information available.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

**Component Information**

**Toxicologically Synergistic** No information available

**Products**

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

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component  | CAS-No     | IARC       | NTP   | ACGIH      | OSHA       | Mexico     |
|--|------------|------------|-------|------------|------------|------------|
| Nickel,<br>tetrakis(triphenyl<br>phosphite-P)-, (T-4)- | 14221-00-2 | Not listed | Known | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing:  
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

**Persistence and Degradability** May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>TDG</b>      | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

## 15. Regulatory information

## International Inventories

| Component  | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|--|------|-----|------|--------|--------|-----|-------|------|------|-------|------|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- | X    | -   | X    | -      | -      |     | -     | -    | -    | -     | -    |

## Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

## U.S. Federal Regulations

TSCA 12(b) Not applicable

## SARA 313

| Component  | CAS-No     | Weight % | SARA 313 - Threshold Values % |
|--|------------|----------|-------------------------------|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- | 14221-00-2 | 95       | 0.1                           |

SARA 311/312 Hazard Categories See section 2 for more information

## CWA (Clean Water Act)

| Component  | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--|----------------------------|-----------------------------|------------------------|---------------------------|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- | -                          | -                           | X                      | -                         |

## Clean Air Act

| Component  | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|--|-----------|-------------------------|-------------------------|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- | X         |                         | -                       |

OSHA Occupational Safety and Health Administration

Not applicable

CERCLA

Not applicable

California Proposition 65

This product does not contain any Proposition 65 chemicals

| Component  | CAS-No     | California Prop. 65 | Prop 65 NSRL | Category   |
|--|------------|---------------------|--------------|------------|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- | 14221-00-2 | Carcinogen          | -            | Carcinogen |

**U.S. State Right-to-Know Regulations**

| Component  | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--|---------------|------------|--------------|----------|--------------|
| Nickel, tetrakis(triphenyl phosphite-P)-, (T-4)- | -             | X          | X            | X        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**16. Other information**

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Revision Date** 19-Jan-2018

**Print Date** 19-Jan-2018

**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**