

SAFETY DATA SHEET

Creation Date 21-May-2010

Revision Date 19-January-2018

Revision Number 3

1. Identification

Product Name Bis(triphenylphosphine)nickel(II)chloride

Cat No. : AC217500000; AC217500100; AC217500500

CAS-No 14264-16-5
Synonyms Dichlorobis(triphenylphosphine)nickel(II)

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

Importer/Distributor

Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Manufacturer

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

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

WHMIS 2015 Classification

Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity	Category 4
Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

Label Elements

Signal Word

Danger

Hazard Statements

Harmful if swallowed, in contact with skin or if inhaled
Causes severe skin burns and eye damage

May cause an allergic skin reaction
 May cause respiratory irritation
 May cause cancer



Precautionary Statements

Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Do not breathe dust/fumes/gas/mist/vapours/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves/protective clothing/eye protection/face protection

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER/doctor
 Rinse mouth
 Do NOT induce vomiting
 Wash contaminated clothing before reuse

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

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Nickel, dichlorobis(triphenylphosphine)-	14264-16-5	98

4. First-aid measures

Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
Inhalation	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician immediately. Clean mouth with water.
Most important symptoms/effects	Causes burns by all exposure routes. May cause allergic skin reaction. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: 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: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated
Treat symptomatically

Notes to Physician

5. Fire-fighting measures

Suitable Extinguishing Media Carbon dioxide (CO₂). Dry chemical. Chemical foam.

Unsuitable Extinguishing Media No information available

Flash Point No information available
Method - No information available

Autoignition Temperature**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

Hydrogen chloride gas Carbon monoxide (CO) Carbon dioxide (CO₂) Oxides of phosphorus Phosphorus trihydride (phosphine) 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	Flammability	Instability	Physical hazards
3	0	0	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 Wear self-contained breathing apparatus and protective suit. Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not let this chemical enter the environment.

7. Handling and storage

Handling Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Use only in area provided with appropriate exhaust ventilation.

Storage Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Corrosives area. Keep under nitrogen.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel, dichlorobis(triphenylpho	TWA: 0.2 mg/m ³		TWA: 0.2 mg/m ³	TWA: 1 mg/m ³		(Vacated) TWA: 1 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.015

sphine)-							mg/m ³
----------	--	--	--	--	--	--	-------------------

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.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment**Eye Protection**

Goggles

Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Nitrile rubber	See manufacturers	-	Splash protection only
Viton (R)	recommendations		

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. 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.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: Particle filter conforming to EN371

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

No information available.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

Physical State	Solid
Appearance	Dark green
Odor	No information available
Odor Threshold	No information available
pH	No information available
Melting Point/Range	> 300 °C / 572 °F
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable

Specific Gravity	No information available
Solubility	insoluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	C ₃₆ H ₃₀ Cl ₂ Ni P ₂
Molecular Weight	654.2

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	heat sensitive. Moisture sensitive.
Conditions to Avoid	Heat, flames and sparks. Incompatible products. Exposure to moist air or water.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Hydrogen chloride gas, Carbon monoxide (CO), Carbon dioxide (CO ₂), Oxides of phosphorus, Phosphorus trihydride (phosphine), Nickel oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic Products	No information available
--------------------------------------	--------------------------

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

Irritation	No information available
Sensitization	No information available
Carcinogenicity	May cause cancer.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Nickel, dichlorobis(triphenylphosphine)-	14264-16-5	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 Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: 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: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

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

Persistence and Degradability Insoluble in water May persist

Bioaccumulation/ Accumulation No information available.

Mobility Is not likely mobile in the environment due its low water solubility.

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

DOT

UN-No UN2923
Proper Shipping Name CORROSIVE SOLIDS, TOXIC, N.O.S.
Proper technical name Nickel, dichlorobis(triphenylphosphine)-
Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group III

TDG

UN-No UN2923
Proper Shipping Name CORROSIVE SOLID, TOXIC, N.O.S.
Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group III

IATA

UN-No UN2923
Proper Shipping Name CORROSIVE SOLID, TOXIC, N.O.S.
Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group III

IMDG/IMO

UN-No UN2923
Proper Shipping Name CORROSIVE SOLID, TOXIC, N.O.S.
Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group III

15. Regulatory information

International Inventories

Component	DSL	NDSL	TSCA	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Nickel, dichlorobis(triphenylphosphine)-	-	X	X	238-154-8	-		X	-	-	-	-

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

16. Other information

Prepared By	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
Creation Date	21-May-2010
Revision Date	19-January-2018
Print Date	19-January-2018
Revision Summary	This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

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