

Safety Data Sheet

Product No. 29-28, 61-314, 91116, 91216, 91578, 9560 Nickel Products, Nickel Pellets, Nickel Powder and Nickel Targets

Issue Date (11-20-15)

Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: Nickel Products, Nickel Pellets, Nickel Powder and Nickel Targets

Synonym: NA

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of substance or mixture

GHS Classification (29 CFR 1910.1200): Nickel - pieces, pellets, shot, sheet, foil, rod, wire, target: Not classified as hazard

2.2 Label Elements: Void on solid forms

2.3 Other hazards

Classification as nickel powder:

GHS Pictograms for powder



GHS02



GHS08



GHS07



GHS09

GHS Classification for powder

GHS02 – Flammable

Flammable Solids

H228: Flammable solid.

GHS07 - Irritant

Skin sensitization 1

H317: May cause an allergic skin reaction.

GHS08 - Health

Carcinogenicity 2

H351: Suspected of causing cancer via inhalation.

STOT RE 1, Inhalation

H372: Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled.

GHS09 - Environment

Aquatic hazard, long-term 3

H410: Harmful to aquatic life with long-lasting effects.

2.3 Label elements for powder

GHS Pictograms for powder



Signal Word: Danger

Hazard statements for powder

H228: Flammable solid.

H317: May cause an allergic skin reaction.

H351: Suspected of causing cancer via inhalation.

H372: Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled.

H410: Harmful to aquatic life with long-lasting effects.

Precautionary statements for powder

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260 Do not breathe dust or mists.

P264 Wash thoroughly after handling.

P270 Do not eat, drink, or smoke when using this product.

P273 Avoid release to the environment.

P272 Contaminated work clothing should not be allowed outside the workplace.

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

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P314 Get medical advice/ attention if you feel unwell.

P321 Specific treatment: see supplemental first aid information.

P332+P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/containers in accordance with local, regional, national and/or international regulations.

2.3 Other hazards for powder

May form combustible concentrations in air (during processing).

Health Effects:

HMIS and NFPA Ratings:

For Nickel - pieces, pellets, shot, sheet, foil, rod, wire, target:

HMIS Ratings: Health: 1 Flammability: 0 Physical: 0

NFPA Ratings: Health: 1 Flammability: 0 Instability: 0

For Nickel powder:

HMIS Hazard Rating: Health: 2; Flammability: 1 Physical Hazard: 0

NFPA Hazard Rating: Health: 2; Fire: 3; Reactivity: 0

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Emergency overview

Appearance: Grey Pellets, Grey Powder, Silvery grey disc.

Immediate effects: OSHA Hazards: Target organ effect (lungs), skin sensitizer.

Potential health effects

Primary Routes of entry: Inhalation, skin, eyes. Target organs: lungs.

Signs and Symptoms of Overexposure: ND

Eyes (Powders): May cause slight eye irritation.

Skin: May cause allergic skin reaction in individuals sensitive to nickel. May cause mechanical irritation and skin sensitization.

Ingestion: Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Inhalation (Powders): May cause irritation to the upper respiratory tract. May cause asthma in individuals sensitive to nickel.

Chronic Exposure: Skin – may cause a type of dermatitis called “nickel itch”; Inhalation - may cause chronic lung inflammation and lung fibrosis.

Chemical Listed as Carcinogen or Potential Carcinogen: Yes

See Toxicological Information (Section 11)

Potential environmental effects

See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP	IARC	OSHA regulated
Nickel (7440-02-0) EC No. 231-111-4	≤100	1	1.5*	Yes	2B	No

*As inhalable fraction

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: Flush eyes with running water for at least 20 minutes.

Skin Contact: Take off contaminated clothing and wash before reuse. Wash skin with plenty of soap and water. If symptoms of sensitization occur, seek medical attention.

Inhalation: Remove from exposed area to fresh air immediately. Give artificial respiration if not breathing. Administer oxygen if breathing is difficult.

Ingestion: Rinse mouth. Get medical attention. Do not give anything by mouth to unconscious person.

Note to physician

Treatment: ND

Medical Conditions generally Aggravated by Exposure: Persons sensitive to Nickel should avoid contact. Pre-existing lung and skin disorders.

Section 5: Fire Fighting Measures

Flash Point: ND

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: Large fires – water spray, fog or regular foam; Small fires – dry chemical, CO2, water spray or regular foam.

Special Fire Fighting Procedures: Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do so without risk. Do not scatter spilled material with high pressure water streams. Dike fire control for later disposal. Keep unauthorized personnel away. Stay upwind. Firefighters

should wear positive pressure self-contained breathing apparatus. Structural firefighters' protective clothing will only provide limited protection.

Unusual Fire and Explosion Hazards: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Metal powders may be come pyrophoric when heated in reducing atmospheres.

Hazardous combustion products: Carbon dioxide, carbon monoxide. May oxidize to nickel oxide if exposed to high temperatures within a fire. Under special conditions nickel can react with carbon monoxide in reducing atmospheres to form Nickel Carbonyl, a toxic gas.

DOT Class: Powders: 4.1, 9

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled:

Personal precautions: Do not touch or walk through spilled material.

Emergency procedures: As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away. Stay upwind.

Containment/cleanup measures: Collect spills by (1) wet sweeping, (2) dry sweeping, using sweeping compound, or (3) by vacuuming using vacuum cleaner equipped with an HEPA filter, (HEPA = high efficiency particulate air filter) and place in a container for proper disposal. Take care not to raise dust. Prevent entry into waterways, sewers, basements or confined areas.

Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage

Precautions to be taken in Handling and Storage:

Handling: Do not inhale powder. Keep container closed when not in use. Ventilation is normally required when handling or using this product to keep exposure to airborne nickel below the exposure limit. If ventilation alone cannot so control exposure, use NIOSH-approved respirators selected according to OSHA 29 CFR 1910.134. Maintain airborne nickel levels as low as possible. Avoid repeated skin contact. Wear suitable gloves. Wash skin thoroughly after handling. Launder clothing and gloves as needed.

Storage: Ventilate closed areas. Keep container closed. Store locked up. Do not store near acids or reactive substances.

Storage temperature: Room temperature.

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required (Powders): Use chemical fume hood. Ventilation is normally required when handling or using this product to keep exposure to airborne nickel below the exposure limit. If ventilation alone cannot so control exposure, use NIOSH-approved respirators selected according to OSHA 29 CFR 1910.134. Maintain airborne nickel levels as low as possible. It is recommended that dust control equipment such as local exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.

Personal Protection Equipment

Respiratory protection: For limited exposure use an N95 dust mask. For prolonged exposure use an air purifying respirator with high efficiency particulate air (HEPA) filters. Use NIOSH/MSHA- or European Standard EN 149-approved respirators if exposure limits are exceeded or symptoms are experienced. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard 147-9.

Protective gloves: Avoid repeated skin contact. Wear suitable gloves.

Skin protection: Wear long-sleeved protective clothing and/or protective coveralls.

Eye protection: Wear safety glasses.

Additional clothing and/or equipment: Eyewash station and safety shower.

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Silvery solid in various forms.

Odor (threshold): None (NA)

Specific Gravity (H₂O=1): 8.9

Vapor Pressure (mm Hg): NA

Vapor Density (air=1): NA

Percent Volatile by volume: NA

Evaporation Rate (butyl acetate=1): NA

Boiling Point: 2732 °C

Melting point: 1453 °C

pH: NA

Solubility in Water: Insoluble

Molecular Weight: 58.71

Section 10: Stability and Reactivity

Stability: Stable under normal conditions.

Conditions to Avoid: Hazardous exothermic reaction improbable. This product can react vigorously with acids to liberate hydrogen, which can form explosive mixtures with air. Under special conditions nickel can react with carbon monoxide in reducing atmospheres to form nickel carbonyl, a toxic gas. Metal powders when heated in reducing atmospheres become pyrophoric.

Materials to Avoid (Incompatibility): Mineral acids, Nickel powder can react explosively or incandescently with ammonium nitrate, perchlorates, phosphorous, selenium, sulfur, etc.

Hazardous Decomposition Products: ND

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Results of component toxicity test performed:

Acute Toxicity

Oral TDLo (Rat): 200 mg/kg

Inhalation TCLo (Rabbit): 130 µg/m³/6h/35W=L

TCLo (Rat): 0.5 mg/m³/24h/13W-C; 0.4 g/m³/40W-L

Reproductive Toxicity

Oral TDLo (Rat): 158 mg/kg (multigenerational)

This product **does** contain compounds listed by NTP or IARC or regulated by OSHA as a carcinogen: Nickel (metallic), CAS 7440-02-2

Section 12: Ecological Information

Ecological Information: Avoid release into environment. May cause long-term adverse effects in the aquatic environment. Nickel is extremely toxic to citrus plants.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: ND

Recycle metal.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

Nickel - pieces, pellets, shot, sheet, foil, rod, wire, target: Not regulated.

Nickel Powder only: The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 micrometers (0.004 inches). 100 lb (45.4Kg)

US DOT Information: Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Nickel powder 1-5 µm)

Hazard Class: 9

Packaging group: III

UN Number: UN3077

Limitations: RQ = 100 lbs (45.4 Kg)

IATA: Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Nickel powder 1-5 µm)

Hazard Class: 9

Packing group: III

UN Number: UN3077

Marine Pollutant: No

Canadian TDG: Environmentally hazardous substances, solid, n.o.s. (Nickel powder 1-5 µm)

Section 15: Regulatory Information

United States Federal Regulations

SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA Hazard Classification: Acute, Chronic

SARA Title III (Section 302): No chemicals in this material are subject to reporting.

SARA Title III (Section 313): The following components are subject to reporting levels: Nickel Powder (1-5 micron).

RCRA: Component is listed.

TSCA: Component is listed.

CERCLA: RQ: 100 lbs (45.4 Kg)

State Regulations

California Proposition 65: Warning! This product is or contains chemical(s) known to the state of California to cause cancer: Nickel (metallic), CAS #7440-02-0.

International Regulations

Canada WHMIS: D2A, D2B, B6

Europe EINECS Numbers: See section 3

Section 16: Other Information

Label Information: See section 2

European Risk and Safety Phrases: R52/53, R40, R43, R48/23. Toxic – T; Sensitizer; Carcinogenic substances, Category 3.

European symbols needed: Skull and crossbones

Canadian WHMIS Symbols:



Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.