TED PELLA, INC.
Microscopy Products for Science and Industry

Material Safety Data Sheet

Product No. 84150-20 to 84180-110 Pelco® NanoXact™ Silver Colloids, 20 to 110 nm Size Nanoparticles, Tannic
Issue Date (07-07-10)
Review Date (09-11-17)

Section 1: Product and Company Identification

Product Name: Pelco® NanoXact™ Silver Colloids, 20 to 110 nm Size Nanoparticles, Tannic
Synonym: silver, nano-scale silver, silver nanoparticles, colloidal silver, tannic silver
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: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	% By Mass	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP	IARC	OSHA regulated
Colloidal Silver (9015-51-4)	0.002	NE	NE	No	No	No
Tannic Acid (1401-55-4)	Trace	NE	NE	No	3	No
Water (7732-18-5)	< 100	ND	ND	No	No	No

Section 3: Hazard Identification

Emergency overview
Appearance: Yellow, white, grey or opal colored liquid, varies with individual particles 20-110 nm total diameters.
Immediate effects: Specific information for the mixture is not available.
Potential health effects
Primary Routes of entry: Ingestion, dermal contact.
Signs and Symptoms of Overexposure: ND
Eyes: May cause slight to mild irritation of the eyes. Prolonged exposure may cause eye damage.
Skin: May cause slight to mild irritation to the skin.
Ingestion: May be harmful if ingested.
Inhalation: Under normal usage not applicable. Mists or aerosol forms may be harmful or irritating.
Acute Health Effects**:** May be irritating to skin and eyes.
Chronic Exposure: Unknown
Chemical Listed As Carcinogen Or Potential Carcinogen: None.
See Toxicological Information (Section11)
Potential environmental effects
See Ecological Information (Section 12)

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Get medical attention if irritation persists.
Skin Contact: Wash the affected area with soap and water. Remove contaminated clothes if necessary.
Inhalation: Under normal usage not applicable. Remove to fresh air. Seek medical attention immediately.
Ingestion: Seek medical attention immediately. If the person is conscious, rinse their mouth out with water.

Note to physician

Treatment: ND
Medical Conditions generally Aggravated by Exposure: Potential sensitivity from previously exposed individuals.

Section 5: Fire Fighting Measures

Flash Point: Non-flammable.
Flammable Limits: NA
Auto-ignition point: NA
Fire Extinguishing Media: None. Material is non-flammable.
Special Fire Fighting Procedures: No special fire fighting procedures required for this material.
Unusual Fire and Explosion Hazards: None.
Hazardous combustion products: None.
DOT Class: Not regulated.

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Small spills can be mixed with vermiculite or sodium carbonate and swept up or diluted or flushed with water to dilute according to local, state, and federal disposal guidelines. Solid surface should be wiped with a surfactant to clean any remaining materials.
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: Avoid contact with skin, eyes and clothing. Avoid prolonged or repeat exposure.
Storage temperature: Closed container stored at 4°C away from light. DO NOT FREEZE.
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required: None under normal conditions of use.

Personal Protection Equipment

Respiratory protection: None under normal conditions of use.
Protective gloves: Wear protective gloves.
Skin protection: Wear protective clothing and gloves.
Eye protection: Always wear approved safety glasses when handling a chemical substance in the laboratory.
Additional clothing and/or equipment: None.

Exposure Guidelines

See Composition/Information on Ingredients (Section2)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Yellow, white, grey or opal colored liquid, varies with individual particles 20-110 nm total diameters.
Odor (threshold): None
Specific Gravity (H_2O=1): ND
Vapor Pressure (mm Hg): ND
Vapor Density (air=1): ND
Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND
Boiling Point: ND
Freezing point / melting point: ND
pH: ND
Solubility in Water: Insoluble
Molecular Weight: 107.87 (Silver)

Section 10: Stability and Reactivity
Stability: Avoid intense light.
Conditions to Avoid: None under proper usage.
Materials to Avoid (Incompatibility): Oxygen, strong acids and bases. DO NOT FREEZE.
Hazardous Decomposition Products: Silver, silver oxides.
Hazardous Polymerization: No hazardous polymerization.

Section 11: Toxicological Information
Results of component toxicity test performed: Bulk Silver:
Species: Rat, Route of Application: Multiple Dose: 330 mg/Kg Exposure Time: 43W, Frequency: 1
Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application.
Species: Rat, Route of Application: Implant Dose: 2400 mg/Kg Results: Tumorigenic: Tumors at site or application. Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.
Species: Mouse, Route of Application: Implant Dose: 11 gm/Kg Results: Tumorigenic: Tumors at site or application. Tumorigenic: m8Equivocal tumorigenic agent by RTECS criteria.
Species: Mouse, Route of Application: Implant Dose: 2570 gm/Kg Results: Tumorigenic: Tumors at site or application. Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.
Human experience: ND
This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information
Ecological Information: ND
Chemical Fate Information: ND

Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: Recover for reuse or recycling.
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information
US DOT Information: Proper shipping name: Not regulated.
IATA: Proper shipping name: Not regulated.
IMO: Proper shipping name: Not regulated.
Marine Pollutant: No
Canadian TDG: Not regulated.

Section 15: Regulatory Information
United States Federal Regulations
MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.
SARA: Section 313: Bulk silver listed. This product is not subject to SARA section 313 reporting requirements.
DE MINIMIS: 1%
SARA Title III: None
RCRA: ND

TSCA: Listed in the TSCA inventory for Silver.
CERCLA: Colloidal Silver (9015-51-4) 0.002% by mass: RQ = 1000 lbs (454 Kg).

State Regulations

California Proposition 65: None

International Regulations

Canada WHMIS: ND
Europe EINECS Numbers: 231-131-3
RTECS Number: VW3500000

Section 16: Other Information

Label Information: ND
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols: ND
HMIS® Hazard Rating: Health: **0**; Flammability: **0**; Reactivity: **1**
NFPA Hazard Rating: Health: **0**; Flammability: **0**; Reactivity: **1**
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Abbreviations used in this document

NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

Disclaimer