

Safety Data Sheet

Product No. 16022 PELCO® Conductive Gold Paste

Issue Date (12-18-14)

Review Date (05-22-15)

Section 1: Product and Company Identification

Product Name: PELCO® Conductive Gold Paste

Synonym:

Company Name

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

Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.

Section 2: Hazard Identification

GHS Pictograms:



GHS Categories:

GHS02: Flammable

GHS07: Irritant

GHS08: Health Hazard

Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Signal Word: DANGER

Hazard Statements:

H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P303+P361+P353	If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Health Effects:

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

HMIS® Hazard Rating: Health: 2; Fire: 3; Reactivity: 0

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

Results of PBT and vPvB assessment: A chemical safety assessment has not been carried out.

PBT: ND

vPvB: ND

Emergency overview:

Appearance: Golden brown liquid/paste.

Immediate effects: Irritation.

Potential health effects

Primary Routes of entry: Skin and eye contact, inhalation.

Signs and Symptoms of Overexposure:

Eyes: Causes eye irritation.

Skin: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: ND

Inhalation: Causes respiratory irritation.

Chronic Exposure: May cause damage to organs through prolonged or repeated exposure.

Chemical Listed As Carcinogen or Potential Carcinogen: No

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/m ³	ACGIH TLV mg/m ³	NTP Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
Gold (7440-57-5)	70	NE	NE	No	No	No
toluene (108-88-3)	10-25	200 ppm Ceiling: 300 ppm	75 mg/m ³ 20 ppm	No	3	No
ethyl acetate (141-78-6)	2.5-5	1400 mg/m ³ 400 ppm	1440 mg/m ³ 400 ppm	No	No	No
ethanol denatured (64-17-5)	2.5-5	1900 mg/m ³ 1000 ppm	1880 mg/m ³ 1000 ppm	No	1	No
cellulose, nitrate (9004-70-0)	2.5-5	NE	NE	No	No	No
propan-2-ol (67-63-0)	≤ 2.5	980 mg/m ³ 400 ppm	984 mg/m ³ 400 ppm* 492 mg/m ³ 200 ppm**	No	3	No
bornan-2-one (76-22-2)	≤ 2.5	2 mg/m ³	19 mg/m ³ 3 ppm* 12 mg/m ³ 2 ppm**	No	No	No
(R)-p-mentha-1, 8-diene (5989-27-5)	≤ 1.0	NE	NE	No	3	No

*Short Term value

**Long Term value

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: Rinse opened eye for several minutes under running water.

Skin Contact: Immediately wash with water and soap and rinse thoroughly.

Inhalation: Supply fresh air and call for a doctor.

Ingestion: If symptoms persist, consult a doctor.

Note to physician

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures

Flash Point: 4° C (39° F)

Flammable Limits: Lower: 1.2 Vol % Upper: 7.0 Vol %

Auto-ignition point: Product is not self-igniting.

Fire Extinguishing Media: CO₂, sand, or extinguishing powder. Do not use water or water with full jet.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full protective gear.

Unusual Fire and Explosion Hazards: ND

Hazardous combustion products: Carbon dioxide/carbon monoxide.

DOT Class: Flammable liquid.

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Wear protective equipment.

Keep unprotected persons away. Ensure adequate ventilation. Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective clothing.

Environmental precautions: Prevent seepage into sewage system, work pits, and cellars.

Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/surface or ground water.

Methods and materials for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust.) Dispose contaminated material as waste according to section 13. Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents.

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: Ensure adequate ventilation/exhaustion at the workplace. Prevent formation of aerosols. Keep ignition sources away – Do not smoke. Protect against electrostatic charges. Store in a cool location. Store away from food stuffs. Keep receptacle tightly sealed. Prevent from drying out.

Storage temperature: Ambient or lower.

Storage Pressure: ND

Section 8: Exposure Controls / Personal Protection

Ingredients with biological limit values:

108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: toluene

0.03 mg/L

Medium: urine

Time: end of shift
Parameter: toluene

0.3 mg/g creatinine
Medium: urine
Time: end of shift
Parameter: o-Cresol with hydrolysis (background)

67-63-0 propan-2-ol

BEI 40 mg/L
Medium: urine
Time: end of shift at end of workweek
Parameter: Acetone (background, nonspecific)

Engineering Controls

Ventilation required: Ensure adequate ventilation.

Personal Protection Equipment

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation. Filter A2B2P3.

Protective gloves: Only use chemical protective gloves with CE-labeling of category III. After use of gloves apply skin-cleaning agents and skin cosmetics.

Skin protection: Appropriate protective clothing.

Eye protection: Tightly sealed goggles.

Additional clothing and/or equipment: Eye wash facility available.

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Gold brown liquid/paste.

Odor (threshold): Mild

Specific Gravity (H₂O=1): ND

Vapor Pressure (mm Hg): 29 hPa (22 mm Hg)

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: 75 °C (167 °F)

Freezing point / melting point: ND

pH: ND

Solubility in Water: Not miscible or difficult to mix.

Molecular Weight: ND

Section 10: Stability and Reactivity

Stability: Stable under recommended storage conditions.

Conditions to Avoid: ND

Materials to Avoid (Incompatibility): Strong oxidizers, acids, and alkalis.
 Hazardous Decomposition Products: None known.
 Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

LD/LC50 values that are relevant for classification:

108-88-3 toluene		
Dermal	LD50	12124 mg/kg (rbt)
Inhalative	LC50/4 h	28.1 mg/l (rat)
141-78-6 ethyl acetate		
Oral	LD50	11300 mg/kg (rat) 5620 mg/kg (rbt)
Dermal	LD50	> 18000 mg/kg (rabbit)
Inhalative	LC50/1 h	200 mg/l (rat)
	LC50/4 h	1600 mg/l (rat)
64-17-5 ethanol denatured		
Oral	LD50	5560 mg/kg (guinea pig) 3450 mg/kg (mouse) 6300 mg/kg (rabbit) 7060 mg/kg (rat)
Inhalative	LC50/ 4 h	20000 mg/l (rat)
9004-70-0 Cellulose, nitrate		
Oral	LD50	> 2000 mg/kg (rat)
67-63-0 propan-2-ol		
Oral	LD50	5045 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rbt)
Inhalative	LC50/4 h	30 mg/l (rat)
5989-27-5 (R)-p-mentha-1, 8-diene		
Oral	LD50	4400 mg/kg/ (rat)
Dermal	LD50	> 5000 mg/kg (rabbit)

Primary irritant effect:

On the skin: Irritant to skin and mucous membranes.

On the eye: No irritating effect.

Sensitization: Sensitization possible through skin contact.

Human experience: ND

This product **does** contain compounds listed by NTP or IARC or regulated by OSHA as a carcinogen: toluene (108-88-3), ethanol denatured (64-17-5) propan-2-ol, (67-63-0) (R)-p-mentha-1, 8-diene (5989-27-5)

Section 12: Ecological Information

Ecological Information:

Aquatic toxicity:

108-88-3 toluene	
EC50/30 min	20 mg/l (bak)
EC50/48 h	6 mg/l (daphnia)
IC50/72 h	12 mg/l (algae)
LC50/96 h	5.8 mg/l (fish)
141-78-6 ethyl acetate	
EC10/18 h	2900 mg/l (bak)
EC50/48 h	717 mg/l (daphnia)
IC50/48 h	3300 mg/l (algae)
LC50/48 h	333 mg/l (fish)
LC50/96 h	230 mg/l (fish)
64-17-5 ethanol denatured	
LC50/24 h	> 100 mg/l (daphnia)
LC50/48 h	8140 mg/l (fish)
9004-70-0 Cellulose, nitrate	
EC50	> 50000 mg/l (bak)
EC50/48 h	10000 mg/l (daphnia)
EC50/72 h	9000 mg/l (algae)
LC0/96 h	> 5000 mg/l (fish)
LC50/96 h	> 7500 mg/l (fish)
67-63-0 propan-2-ol	
EC50/72 h	1000 mg/l (algae)
LC50/96 h	9640 mg/l (fish)
5989-27-5 (R)-p-mentha-1, 8-diene	
LC50	34 mg/l (fish)

Remark: Harmful to fish.

Water hazard class 2: Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: Ethyl Acetate (141-78-6): U112; Toluene (108-88-3): U220. Can be recycled to recover precious metal. Federal, State and local laws governing disposal of materials can differ. Must not be disposed of together with household garbage. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

US DOT Information: Proper shipping name: Flammable liquids, n.o.s. (Toluene, Ethyl acetate)

Hazard Class: 3

Packaging group: II

UN Number: UN1993

IATA: Proper shipping name: Flammable liquids, n.o.s. (Toluene, Ethyl acetate)

Hazard Class: 3

Packing group: II

UN Number: UN1993

IMO: Proper shipping name: Flammable liquids, n.o.s. (Toluene, Ethyl acetate)

Class: 3

UN Number: 1993

Packing group: III

EMS: F-E, S-E

Marine Pollutant: No

Canadian TDG: Flammable liquids, n.o.s. (Toluene, Ethyl acetate)

Section 15: Regulatory Information

United States Federal Regulations

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

SARA Section 355: Substance not listed.

SARA Section 313: toluene (108-88-3) is listed. Propan-2-ol (67-63-0) is listed.

RCRA: Ethyl Acetate (141-78-6): U112; Toluene (108-88-3): U220

TSCA: All components are listed on the TSCA public inventory.

CERCLA: Ethyl Acetate (141-78-6): RQ = 5000 lbs (2270 kg); Toluene (108-88-3): RQ = 1000 lbs (454 kg)

State Regulations

California Proposition 65:

toluene (108-88-3): Chemicals known to cause reproductive toxicity for females.

toluene (108-88-3), ethanol (64-17-5): Chemicals known to cause developmental toxicity.

International Regulations

Canada WHMIS: ND

Europe EINECS Numbers: Gold (7440-57-5): EINECS#: 231-165-9; Toluene (108-88-3): EINECS#: 203-625-9; Ethanol (64-17-5): EINECS#: 200-578-6; Ethyl acetate (141-78-6): EINECS#: 205-500-4.

Section 16: Other Information

Label Information: Flammable

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols: ND

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.

SDS Form 0013F1V4