

**Safety Data Sheet**

**Product No. 16048-25 Silver Paint Diluent**

**Issue Date (03-04-15)**

**Review Date (04-17-15)**

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**Section 1: Product and Company Identification**

**Product Name: Silver Paint Diluent**

Synonym: 4-Methyl-2-pentanone, 4-Methylpentan-2-one, Iso-butyl methyl ketone, Methyl isobutyl ketone, Isopropylacetone

**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.**

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**Section 2: Hazard Identification**

GHS Pictograms:



GHS Categories:

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):**

Flammable liquids (Category 2), H225

Acute toxicity, Inhalation (Category 4), H332

Eye irritation (Category 2A), H319

Carcinogenicity (Category 2), H351

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Signal Word: DANGER

**Hazard statement(s):**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

**Precautionary statement(s):**

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.

P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ eye protection/ face protection.  
P281 Use personal protective equipment as required.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS:**

Repeated exposure may cause skin dryness or cracking. May form explosive peroxides.

**Health Effects:**

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

HMIS® Hazard Rating: Health: 1; Chronic Health Hazard: \*; Fire: 3; Physical Hazard: 0  
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment: not available as chemical safety assessment not required/not conducted.

PBT: NA

vPvB: NA

**Emergency overview:**

Appearance: Colorless liquid.

Immediate effects: ND

**Potential health effects**

Primary Routes of entry: Inhalation, eye contact, skin contact.

Signs and Symptoms of Overexposure: Eye irritation, respiratory irritation.

Eyes: Causes serious eye irritation.

Skin: May cause skin dryness or cracking.

Ingestion: Harmful if swallowed.

Inhalation: Harmful if inhaled, may cause respiratory irritation.

Chronic Exposure: Suspected of causing cancer, specific target organ toxicity.

Chemical Listed As Carcinogen Or Potential Carcinogen: Yes. IARC: 2B - Group 2B:

Possibly carcinogenic to humans (4-Methylpentan-2-one)

See Toxicological Information (Section 11)

### Potential environmental effects

See Ecological Information (Section 12)

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### Section 3: Composition / Information on Ingredients

<b>Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)</b>	<b>%</b>	<b>OSHA PEL mg/m3</b>	<b>ACGIH TLV mg/m3</b>	<b>NTP Carcinogen</b>	<b>IARC Carcinogen</b>	<b>OSHA regulated Carcinogen</b>
4-Methylpentan-2-one (108-10-1) EC-No. 203-550-1 Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; Carc. 2; STOT SE 3; H225, H319, H332, H335, H351	<= 100	TWA 50 ppm 205 mg/m3 STEL 75 ppm 300 mg/m3	STEL 75 ppm (TLV) TWA 20 ppm (TLV)	No	Yes – Group 2B	No

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### Section 4: First Aid Measures

#### If accidental overexposure is suspected

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Eye(s) Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin Contact:** Wash off with soap and plenty of water. Consult a physician.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### Note to physician

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

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### **Section 5: Fire Fighting Measures**

Flash Point: 14 °C (57 °F) - closed cup

Flammable Limits: Upper explosion limit: 8 % (V)

Lower explosion limit: 1.2 % (V)

Auto-ignition point: ND

Fire Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

Special hazards arising from the substance or mixture: Carbon oxides

Unusual Fire and Explosion Hazards: Vapors may form explosive mixture with air.

Hazardous combustion products: ND

DOT Class: Flammable liquid

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### **Section 6: Accidental Release Measures**

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

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

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### **Section 7: Handling and Storage**

Precautions to be taken in Handling and Storage: Avoid contact with skin and eyes.

Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature: Room temperature, storage class (TRGS 510): Flammable liquids

Storage Pressure: NA

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**Section 8: Exposure Controls / Personal Protection**

Component	CAS-No	Value	Control Parameters	Basis
4-Methylpentan-2-one	108-10-1	STEL	75 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Headache Dizziness Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans		
		STEL	75.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Headache Dizziness Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans.		
		TWA	50 ppm 205 mg/m3	USA. OSHA- TABLE Z-1 Limits for Air Contaminants -1910.1000
		STEL	75 ppm 300 mg/m3	USA. OSHA- TABLE Z-1 Limits for Air Contaminants – 1910.1000
		TWA	100.000000 ppm 410.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants
		The value in mg/m3 is approximate.		
		TWA	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Headache Dizziness Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans.		
		TWA	20.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Headache Dizziness Substances for which there is a Biological Exposure Index or		

		Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans.		
		TWA	50.000000 ppm 205.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	75.000000 ppm 300.000000 mg/m3	USA. NIOSH Recommended Exposure Limits

**Biological occupational exposure limits:**

Component	CAS-No	Parameters	Value	Biological Specimen	Basis
4-Methylpentan-2-one	108-10-1	methyl isobutyl ketone	2.0000 mg/l	In urine	
	Remarks	End of shift (As soon as possible after exposure ceases)			
		methyl isobutyl ketone	1.0000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
		End of shift (As soon as possible after exposure ceases)			
		methyl isobutyl ketone	1 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
		End of shift (As soon as possible after exposure ceases)			

**Engineering Controls**

Ventilation required: Adequate ventilation required.

**Personal Protection Equipment**

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protective gloves: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Splash contact, Material: butyl-rubber, Minimum layer thickness: 0.3 mm, Break through time: 175 min, Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M) test method: EN374. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Skin protection: Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Eye protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Exposure Guidelines**

See Composition/Information on Ingredients (Section 3)

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### **Section 9 Physical and Chemical Properties**

Formula: C<sub>6</sub>H<sub>12</sub>O

Appearance and Physical State: Colorless liquid

Odor (threshold): 0.1 ppm

Specific Gravity (H<sub>2</sub>O=1): 0.80

Vapor Pressure (mm Hg): 20 hPa (15mmHG) at 20°C (68°F)

Vapor Density (air=1): 3.46

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: 117 - 118 °C (243 - 244 °F)

Freezing point / melting point: -80 °C (-112 °F) - lit. point

pH: ND

Solubility in Water: ca.20 g/l

Partition coefficient: noctanol/water: log Pow: 1.31

Molecular Weight: 100.16 g/mol

Surface tension 23.6 mN/m at 20 °C (68 °F)

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### **Section 10: Stability and Reactivity**

Stability: Stable under recommended storage conditions. Test for peroxide formation before distillation or evaporation. Test for peroxide formation or discard after 1 year.

Conditions to Avoid: Heat, flames, and sparks.

Materials to Avoid (Incompatibility): Oxidizing agents, strong bases.

Hazardous Decomposition Products: ND

Hazardous Polymerization: Will not occur.

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### **Section 11: Toxicological Information**

Results of component toxicity test performed:

#### **Acute toxicity:**

LD50 Oral - Rat - 2,080 mg/kg

LC50 Inhalation - Rat - 4 h - 8.2 - 16.4 mg/m<sup>3</sup>

LD50 Dermal - Rabbit - > 16,000 mg/kg

**Skin corrosion/irritation:** Skin - Rabbit

Result: Mild skin irritation - 24 h

**Serious eye damage/eye irritation:** Eyes - Rabbit

Result: Moderate eye irritation - 24 h

**Respiratory or skin sensitization:** No data available

**Germ cell mutagenicity:** No data available

**Reproductive toxicity:** No data available

Developmental Toxicity: Mouse - Inhalation

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on

Embryo or Fetus: Fetal death.

Developmental Toxicity - Mouse - Inhalation

Specific Developmental Abnormalities: Central nervous system. Specific Developmental

Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities:

Cardiovascular (circulatory) system.

**Specific target organ toxicity - single exposure**

May cause respiratory irritation.

RTECS: SA9275000

Human experience:

Blurred vision, Dermatitis, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence

This product **does** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

**Carcinogenicity:** IARC: 2B - Group 2B: Possibly carcinogenic to humans (4-Methylpentan-2-one)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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## Section 12: Ecological Information

Ecological Information:

Toxicity to fish: LC0 - *Leuciscus idus melanotus* - 480 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* (Water flea) - 1,550 - 3,623 mg/l - 24 h

Toxicity to algae: EC50 - *Desmodesmus subspicatus* (green algae) - 980 - 2,000 mg/l - 48 h

Persistence and degradability: Biodegradability Biotic/Aerobic - Exposure time 7 d

Bio accumulative potential: ND

Mobility in soil: ND

Chemical Fate Information: ND

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## Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: U161



Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

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#### **Section 14: Transportation Information**

US DOT Information: Proper shipping name: Methyl isobutyl ketone

Hazard Class: 3

Packaging group: II

UN Number: UN1245

RQ: 5000 lbs

Poison Inhalation Hazard: No

IATA: Proper shipping name: Methyl isobutyl ketone

Hazard Class: 3

Packing group: II

UN Number: UN1245

Marine Pollutant: No

Canadian TDG: Proper shipping name: Methyl isobutyl ketone

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#### **Section 15: Regulatory Information**

##### **United States Federal Regulations**

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

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313: 4-Methylpentan-2-one, CAS-No. 108-10-1.

SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components: 4-Methylpentan-2-one, CAS-No.108-10-1.

Pennsylvania Right To Know Components: 4-Methylpentan-2-one, CAS-No.108-10-1.

New Jersey Right To Know Components: 4-Methylpentan-2-one, CAS-No.108-10-1.

RCRA: U161

TSCA: All components are listed.

CERCLA: RQ: 5000 lbs (2270 Kg)

##### **State Regulations**

California Proposition 65: WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm, CAS-No. 108-10-1.

##### **International Regulations**

Canada WHMIS: BD2, this product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Europe EINECS Numbers: 203-550-1

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#### **Section 16: Other Information**

Label Information: Highly flammable, Harmful

European Risk and Safety Phrases: R11-20-36/37-66. Risk Statements: Highly flammable. Harmful by inhalation. Irritating to eyes and skin. Repeated exposure may cause skin dryness and cracking. S9, S16, S29. Safety Statements: Keep container in a well-ventilated place. Keep away from sources of ignition – no smoking. Do not empty into drains.

European symbols needed: F - Xn

Canadian WHMIS Symbols: ND

**Abbreviations used in this document**

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

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