Section 1: Product and Company Identification

**Product Name:** Formaldehyde, 37%, microfiltered (Formalin),
Synonym: Methanal, Methyl aldehyde, Methylene oxide

**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 the substance or mixture

**GHS Pictograms**

![GHS Pictograms](image)

**GHS Categories**

**GHS02 – Flammable**
- Flam. Liq. 3 H226: Flammable liquid and vapor.

**GHS06 – Toxic**
- Acute Tox. 3 H311: Toxic in contact with skin.
- Acute Tox. 3 H331: Toxic if inhaled
- Acute Tox. 4 H302: Harmful if swallowed

**GHS08 – Health**
- Carc. 2 H351: Suspected of causing cancer.
- STOT SE 1 H370: Causes damage to organs.

**GHS05 – Corrosion**
- Skin Corr. 1B H314: Causes severe skin burns and eye damage.
- Eye Dam. 1 H318: Causes serious eye damage.

**GHS07 – Irritant**
- Skin Sens. 1 H317: May cause an allergic skin reaction.

2.2 **Label elements**

**Hazard pictograms**
Signal Word: DANGER

Hazard-determining components of labeling: formaldehyde, methyl alcohol

Hazard statements:
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H370 Causes damage to organs.

Precautionary statements:
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P303|P361|P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305|P351|P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P322 Specific measures (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: NA
vPvB: NA

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
Label: T; Toxic - R23/24/25-39/23/24/25: Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Label: C; Corrosive - R34: Causes burns.
Label: Xn; Harmful - R40: Limited evidence of a carcinogenic effect.
Label: Xi; Irritant - R37: Irritating to respiratory system.
Label: Xs; Sensitizing - R43: May cause sensitisation by skin contact.
Risk phrases:
23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.
34 - Causes burns.
37 - Irritating to respiratory system.
39/23/24/25 - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
40 - Limited evidence of a carcinogenic effect.
43 - May cause sensitisation by skin contact.

**Safety phrases:**
26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 - This material and its container must be disposed of as hazardous waste.

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

**Emergency overview**
Appearance: Colorless liquid.
Immediate effects: Toxic

**Potential health effects**
Primary Routes of entry: Inhalation, ingestion, contact with skin and eyes.
Signs and Symptoms of Overexposure: ND
Eyes: Toxic by contact with eye. Toxic: danger of very serious irreversible effects in contact with eyes.
Skin: Toxic in contact with skin. Toxic: danger of very serious irreversible effects in contact with skin.
Ingestion: Toxic if swallowed. Toxic: danger of very irreversible effects if swallowed.
Inhalation: Toxic by inhalation, Toxic: danger of very serious irreversible effects through inhalation.
Chronic Exposure: ND
Chemical Listed As Carcinogen Or Potential Carcinogen: Yes.
See Toxicological Information (Section 11)

**Potential environmental effects**
See Ecological Information (Section 12)

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**Section 3: Composition / Information on Ingredients**

<table>
<thead>
<tr>
<th>Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)</th>
<th>%</th>
<th>OSHA PEL mg/m³</th>
<th>ACGIH TLV mg/m³</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde (CAS: 50-00-0) EINECS: 200-001-8 H301; H311; H331; H351; H314; H317</td>
<td>25-50</td>
<td>TWA 0.75 ppm</td>
<td>0.37 mg/m³ 0.3 ppm</td>
<td>R</td>
<td>Group 1</td>
<td>Yes</td>
</tr>
<tr>
<td>Methyl Alcohol (67-56-1) EINECS: 200-659-6 H225; H302; H312; H315; H332; H370</td>
<td>10-25</td>
<td>260 mg/m³ 200 ppm</td>
<td>250 ppm</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

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**Section 4: First Aid Measures**

**If accidental overexposure is suspected**
General information: Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Remove breathing equipment only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.
Eye(s) Contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
Skin Contact: Immediately wash with water and soap and rinse thoroughly.
Inhalation: Supply fresh air or oxygen; call for doctor. In case of unconsciousness, place patient stably in side position for transportation.
Ingestion: Do not induce vomiting; call for medical help immediately. Drink plenty of water and provide fresh air. Call for a doctor immediately.

Note to physician
Treatment: ND
Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures
Flash Point: 60 °C
Ignition temperature: 300 °C
Flammable Limits: Lower: 5.5 Vol %, Upper: 73.0 Vol %.
Auto-ignition point: Product is not self-igniting.
Fire Extinguishing Media: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special Fire Fighting Procedures: Use mouth respiratory protective device.
Unusual Fire and Explosion Hazards: Product does not present an explosion hazard.
Hazardous combustion products: Oxides of carbon.
DOT Class: Flammable, Corrosive.

Section 6: Accidental Release Measures
Steps to be Taken in Case Material is Released or Spilled
Personal precautions, protective equipment, and emergency procedures: Wear protective equipment. Keep unprotected persons away.
Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/surface or ground water.
Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Ensure adequate ventilation.
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:
Storage: Keep from freezing. Keep container tightly sealed.
Storage temperature: Room temperature.
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection
Ingredients with limit values that require monitoring at the workplace

<table>
<thead>
<tr>
<th>50-00-0 Formaldehyde</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL</td>
<td>Short-term value: 2.5 mg/m³, 2 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 2.5 mg/m³, 2 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>67-56-1 Methyl alcohol</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL</td>
<td>Short-term value: 333 mg/m³, 250 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 266 mg/m³, 200 ppm</td>
</tr>
</tbody>
</table>

General protective and hygienic measures
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.

**Engineering Controls**
Ventilation required: Ensure good ventilation/exhaustion at the workplace. Use a chemical fume hood.

**Personal Protection Equipment**
Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Proective gloves: Wear protective gloves.
Skin protection: Wear protective gloves and clothing.
Eye protection: Tightly sealed goggles.
Additional clothing and/or equipment: Eye wash station.

**Exposure Guidelines**
See Composition/Information on Ingredients (Section 3)

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### Section 9 Physical and Chemical Properties
Appearance and Physical State: Colorless liquid.
Odor (threshold): Strong (ND)
Specific Gravity (H₂O=1): 0.9045 g/cm³
Vapor Pressure at 20 °C: 128 hPa
Vapor Density (air=1): ND
Percent Volatile by volume: ND
Evaporation Rate (butyl acetate=1): ND
Boiling Point: 64 °C
Freezing point / melting point: ND
pH: 7
Solubility in Water: Fully miscible.
Organic solvents: 49.0 %, Water: 51.0 %
VOC (EC) 49.00 %
Molecular Weight: NA

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### Section 10: Stability and Reactivity
Stability: Stable.
Conditions to Avoid: No further relevant information available.
Materials to Avoid (Incompatibility): No further relevant information available.
Hazardous Decomposition Products: No decomposition if used according to specifications.
Hazardous Polymerization: No dangerous reactions known.

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### Section 11: Toxicological Information
**Results of component toxicity test performed**
Acute toxicity - LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>Component</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>50-00-0 Formaldehyde</strong></td>
<td>&gt;200 mg/kg (Rat)</td>
<td></td>
</tr>
<tr>
<td><strong>67-56-1 Methyl alcohol</strong></td>
<td>5628 mg/kg (Rat)</td>
<td>15800 mg/kg (Rabbit)</td>
</tr>
</tbody>
</table>

**Primary irritant effect**
  - On the skin: Caustic effect on skin and mucous membranes.
  - On the eye: Strong caustic effect.
Sensitization: Sensitization possible through skin contact.
**Additional toxicological information**
The product shows the following dangers according to the calculation method of the General EU Classification. Guidelines for Preparations as issued in the latest version:
- Toxic, Corrosive, Irritant, Harmful
  Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of the esophagus and stomach.
Human experience: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach
This product does contain compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

**Section 12: Ecological Information**

**Ecological Information**
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.

**Behavior in environmental systems**
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.

**Additional ecological information**
General notes: Water hazard class 2 (German Regulation) (Self-assessment): Hazardous for water. Do not allow product to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or un-neutralized. Danger to drinking water if even small quantities leak into the ground.
Chemical Fate Information: ND

**Section 13 Disposal Considerations**
RCRA 40 CFR 261 Classification: ND
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
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: Formaldehyde solutions, flammable
Hazard Class: 3
Subsidiary Hazard Class: 8
Packaging group: III
UN Number: UN1198
IATA: Proper shipping name: Formaldehyde solutions, flammable
Hazard Class: 3
Subsidiary Hazard Class: 8
Packaging group: III
UN Number: UN1198
Marine Pollutant: No
Canadian TDG: Formaldehyde solutions, flammable

**Section 15: Regulatory Information**

**United States Federal Regulations**
SARA: Section 355 (extremely hazardous substances): 50-00-0 formaldehyde.
SARA Title III: Section 313 (Specific toxic chemical listings): 50-00-0 formaldehyde, 67-56-1 Methyl Alcohol
RCRA: ND
TSCA: All ingredients are listed.
CERCLA: Formaldehyde 50-00-0: RQ = 100 lbs (45.4 Kg).

**State Regulations**
California Proposition 65: This chemical is known to the State of California to cause cancer (50-00-0 formaldehyde).
Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.
Chemicals known to cause developmental toxicity: 67-56-1 Methyl Alcohol.

**Carcinogenic categories:**
EPA (Environmental Protection Agency): 50-00-0 formaldehyde - B1
TLV (Threshold Limit Value established by ACGIH): 50-00-0 formaldehyde - A2
NIOSH-Ca (National Institute for Occupational Safety and Health): 50-00-0 formaldehyde.
OSHA-Ca (Occupational Safety & Health Administration): 50-00-0 formaldehyde.
A Chemical Safety Assessment has not been carried out.

**International Regulations**
Canada WHMIS: Canadian Domestic Substances List (DSL): All ingredients are listed.
Canadian Ingredient Disclosure list (limit 0.1%): 50-00-0 formaldehyde.
Europe EINECS Numbers: 200-659-6

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**Section 16: Other Information**

Label Information: Flammable, Toxic, Health Hazard, Corrosive, Irritant.
European Risk and Safety Phrases: See Section 2
European symbols needed: T - Toxic, C - Corrosive, Xn - Harmful, Xi – Irritant, Xi – Sensitizing.
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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