

Safety Data Sheet

Product No. 18505, 18505-100 Formaldehyde, 16%, EM Grade (Methanol Free)

Issue Date (04-23-15)

Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: Formaldehyde, 16%, EM Grade (Methanol Free)

Synonym: Paraformaldehyde 16% Solution, EM Grade

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



GHS08



GHS07

GHS Categories

GHS08 - Health

Muta. 2 H341: Suspected of causing genetic defects.

Carc. 1B H350: May cause cancer.

Acute Tox. 4 H302: Harmful if swallowed.

Acute Tox. 4 H312: Harmful in contact with skin.

Acute Tox. 4 H332: Harmful if inhaled.

GHS07: Irritant

Skin Irrit. 2 H315: Causes skin irritation.

Eye Irrit. 2 H319: Causes serious eye irritation.

Skin Sens. 1 H317: May cause an allergic skin reaction.

2.2 Label elements

Hazard pictograms



GHS07



GHS08

Signal Word: DANGER

Hazard-determining elements of labeling: formaldehyde

Hazard statements:

H227 Combustible liquid.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H350 May cause cancer.

Precautionary statements:

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.
P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P301+P330+P312 IF SWALLOWED: Rinse mouth. Call a poison center/doctor if you feel unwell.
P302+P350 IF ON SKIN: Wash with plenty of water.
P304+P341 IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.
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.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Keep away from alkaline solutions.
Keep away from oxidizing agents and acidic substances.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful: R20/21/22-40: Harmful by inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect.
Xi; Irritant: R36/37/38: Irritating to eyes, respiratory system and skin.
Xi; Sensitizing: R43: May cause sensitisation by skin contact.

Code letter and hazard designation of product:

Label: Xn - Harmful

Hazard-determining components of labeling: formaldehyde.

Risk phrases:

20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.

36/37/38 - Irritating to eyes, respiratory system and skin.

40 - Limited evidence of a carcinogenic effect.

43 - May cause sensitisation by skin contact.

Safety phrases:

2 - Keep out of the reach of children.

36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

46 - If swallowed, seek medical advice immediately and show this container or label.

56 - Dispose of this material and its container to hazardous or special waste collection point

Health Effects:

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

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

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

Results of PBT and vPvB assessment:

PBT: NA

vPvB: NA

Emergency overview

Appearance: Colorless liquid.

Immediate effects: ND

Potential health effects

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

Signs and Symptoms of Overexposure: Extreme or prolonged exposure will induce tearing of eye tissue, coughing, difficulty in breathing, nausea, headache, or weakness.

Eyes: Irritating to eyes.

Skin: Harmful in contact with skin. May cause sensitisation by skin contact.

Ingestion: Harmful if swallowed.

Inhalation: Harmful by inhalation. Irritating respiratory system.

Chronic Exposure: Extreme or prolonged exposure will induce tearing of eye tissue, coughing, difficulty in breathing, nausea, headache, or weakness.

Chemical Listed As Carcinogen Or Potential Carcinogen: Formaldehyde (50-00-0).

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
Formaldehyde (50-00-0) EC-No. 200-001-8 H301: Acute Tox. 3 H311: Acute Tox. 3 H314: Skin Corr. 1B H317: Skin Sens. 1 H331: Acute Tox. 3 H351: Carc. 2	10-25	0.75 ppm	0.37 0.3 ppm	K	Group 1	Yes

Section 4: First Aid Measures

If accidental overexposure is suspected

General: 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.

Eye(s) Contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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

Inhalation: Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

Ingestion: Call for a doctor immediately.

Note to physician

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures

Flash Point: 62 °C

Flammable Limits: Lower: 7.0 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: ND

DOT Class: None

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: 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). 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: Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. Keep container tightly sealed. Protect from heat and direct sunlight.

Storage temperature: Ambient. **Do not freeze.**

Storage Pressure: ND

Section 8: Exposure Controls / Personal Protection

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. Avoid contact with the eyes and skin.

Engineering Controls

Ventilation required: Use in chemical fume hood or ensure good ventilation/exhaustion at the workplace.

Control Parameters

WEL Short-term value: 2.5. mg/m³, 2 ppm

Long-term value: 2.5. mg/m³, 2 ppm

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.

Protective gloves: Wear protective gloves.

Skin protection: Wear gloves and protective clothing.

Eye protection: Tightly sealed goggles.
Additional clothing and/or equipment: Eye wash station or shower.

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Colorless liquid.

Odor (threshold): Aldehyde-like (ND)

Specific Gravity (H₂O=1): 1.04 g/cm³

Vapor Pressure 20 °C: 23 hPa

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: >93°C (>199°F)

Freezing point / melting point: ND

pH: 2.8

Solubility in Water: Fully miscible.

Organic solvents: 16.4 %

Water: 83.5 %

VOC (EC) 16.40 %

Molecular Weight: 30.03 g/ mol

Section 10: Stability and Reactivity

Stability: Stable under recommended storage conditions.

Conditions to Avoid: No further relevant information available

Materials to Avoid (Incompatibility): Strong bases, Strong oxidizing agents, Amines, Strong acids, Acid anhydrides, Peroxides, Isocyanates, Phenol, Aniline.

Hazardous Decomposition Products: No dangerous decomposition products known.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Results of component toxicity test performed:

Acute toxicity:

LD/LC50 values relevant for classification, 50-00-0 formaldehyde: Oral LD50 >200 mg/kg (rat).

Primary irritant effect:

On the skin: Irritant to skin and mucous membranes.

On the eye: Irritating 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: Harmful, Irritant.

Human experience: ND

Carcinogenic categories:

IARC (International Agency for Research on Cancer): 50-00-0 formaldehyde - 1

NTP (National Toxicology Program): 50-00-0 formaldehyde - R

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. 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: Not regulated via ground.

IATA: Proper shipping name: Aviation regulated liquid, n.o.s. (formaldehyde 16% solution)

Hazard Class: 9

Packing group: NA

UN Number: UN3334

Marine Pollutant: No

Canadian TDG: Not regulated via ground.

Section 15: Regulatory Information

United States Federal Regulations

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

SARA: Section 355 (extremely hazardous substances): 50-00-0 – formaldehyde.

SARA Title III: Section 313 (Specific toxic chemical listings): 50-00-0 – formaldehyde.

RCRA: ND

TSCA: All ingredients are listed.

CERCLA: Formaldehyde 50-00-0: RQ = 100 lbs (45.4 Kg).

State Regulations

California Proposition 65: This product contains chemicals 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: None of the ingredients is listed.

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.

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: ND

Section 16: Other Information

Label Information: Harmful

European Risk and Safety Phrases: See Section 2.

European symbols needed: X_n Harmful.

Canadian WHMIS Symbols:

B3 - Combustible liquid

D1B - Toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects

Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

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