Section 1: Product and Company Identification
Product Name: M-BOND™ 610 Adhesive, Kit Component
Synonym: None
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
GHS Pictograms:

GHS Classification:
Flam. Liq. 2; H225
Acute Tox. 4; H302
Skin Irrit. 2; H315
Skin Sens. 1; H317
Eye Irrit. 2; H319
STOT SE 3; H335
Carc. 2; H351
Aquatic Chronic 2; H411

Signal Word: DANGER

Contains: Tetrahydrofuran and Polyglycidyl, Ether of Phenol-Formaldehyde

Hazard Statements:
H225: Highly flammable liquid and vapor.
H302: Harmful if swallowed.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H351: Suspected of causing cancer.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P201: Obtain special instructions before use.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
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.

Additional Information: EUH019: May form explosive peroxides.

Health Hazards (Acute and Chronic): Chronic over-exposure may result in kidney and/or liver damage.

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

Results of PBT and vPvB assessment: Not classified as PBT or vPvB.
PBT: Not classified.
vPvB: Not classified.

Emergency overview:
Appearance: Colorless liquid.
Immediate effects: Causes skin irritation, respiratory irritation and serious eye irritation.

Potential health effects
Primary Routes of entry: Inhalation, skin contact and eye contact, ingestion.
Signs and Symptoms of Overexposure: Excessive exposure to solvents may cause respiratory irritation and central nervous system depression. Signs and symptoms of central nervous system depression, in order of increasing exposure, are headache, dizziness, drowsiness, and incoordination. Signs and symptoms of excessive exposure may be nausea and/or vomiting.

Eyes: Causes serious eye irritation.
Skin: Causes skin irritation. May cause an allergic skin reaction.
Ingestion: Harmful if swallowed.
Inhalation: May cause respiratory irritation.
Chronic Exposure: Suspected of causing cancer.
Chemical Listed As Carcinogen Or Potential Carcinogen: Yes
Carcinogenicity: NTP: Not listed
IARC Monographs: Not listed
OSHA Regulated: Regulated
See Toxicological Information (Section11)

Potential environmental effects
See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Principle Hazardous Component(s) (chemical and common name(s))</th>
<th>%</th>
<th>OSHA PEL mg/m³</th>
<th>ACGIH TLV mg/m³</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA regulated Carcinogen</th>
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</thead>
<tbody>
<tr>
<td>Tetrahydrofuran (109-99-9) Ec-No: 203-726-8</td>
<td>45-55</td>
<td>200 ppm 590 mg/m³</td>
<td>STEL 250 ppm*</td>
<td>NE</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
**Flam. Liq. 2; H225**
**Acute Tox. 4; H302**
**Eye Irrit. 2; H319**
**STOT SE 3; H335**
**Carc. 2; H351**
**EUH019**

<table>
<thead>
<tr>
<th>Polyglycidyl Ether of Phenol-Formaldehyde (28064-14-4)</th>
<th>30-40</th>
<th>NE</th>
<th>NE</th>
<th>No</th>
<th>No</th>
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<tbody>
<tr>
<td>Skin Irrit. 2; H315</td>
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<td>Skin Sens. 1; H317</td>
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<td>Eye Irrit. 2; H319</td>
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<tr>
<td>Aquatic Chronic 2; H411</td>
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<tr>
<th>Methyl Ethyl Ketone (78-93-3)</th>
<th>5.3-8.9</th>
<th>200 ppm</th>
<th>590 mg/m³</th>
<th>STEL 300 ppm*</th>
<th>885 mg/m³*</th>
<th>NE</th>
<th>No</th>
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<tr>
<td>Flam. Liq. 2; H225</td>
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<td>EUH066</td>
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*NIO SH 15 minutes average value*

**Section 4: First Aid Measures**

**If accidental overexposure is suspected**

**Eye(s) Contact:** In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Continue rinsing if irritation persists. Get medical advice/attention.

**Skin Contact:** In case of contact, flush skin with water while removing contaminated clothing. Wash affected area with soap and water. Wash contaminated clothing before reuse.

**Inhalation:** If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention.

**Ingestion:** If swallowed, rinse mouth. Do NOT induce vomiting unless directed to do so by a physician. If conscious, give large amounts of water. Get medical advice/attention.

**Note to physician**

**Treatment:** ND

**Medical Conditions generally Aggravated by Exposure:** Skin disorders, respiratory system disease.

**Section 5: Fire Fighting Measures**

**Flash Point:** 6°F (-14°C) PMCC

**flammable Limits:** LEL, 1.8 / UEL, 11.8

**Auto-ignition point:** 610°F (320°C)

**Fire Extinguishing Media:** Alcohol foam, dry chemical, carbon dioxide. Do not use water jet. Direct water jet may spread the fire.

**Special Fire Fighting Procedures:** Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

**Unusual Fire and Explosion Hazards:** Highly flammable liquid and vapor. May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide, Phenolic and Explosive Peroxides. Vapors are heavier than air...
and may travel considerable distances to a source of ignition and flashback. Prevent liquid entering sewers, basements and work pits; vapor may create explosive atmosphere.

Hazardous combustion products: ND

DOT Class: Flammable liquid.

Section 6: Accidental Release Measures
Steps to be Taken in Case Material is Released or Spilled:
Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use personal protective equipment as required. See Section: 8. Avoid breathing vapors.

Environmental precautions: Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.

Methods and material for containment and cleaning up: Use non-sparking equipment when picking up flammable spill. Absorb spillages onto sand, earth or any suitable absorbent material. Transfer to a container for disposal. Ventilate the area and wash spill site after material pick up is complete. This material and its container must be disposed of as hazardous waste.

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: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all contact. Do not breathe vapor. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Take precautionary measures against static discharges. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.


Storage temperature: Ambient. Flammable liquid storage area. Avoid subjecting resin to temperatures above 90°F/32°C due to presence of volatile methyl ethyl ketone.

Storage Pressure: ND

Section 8: Exposure Controls / Personal Protection

Engineering Controls
Ventilation required: Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure Local Exhaust: A system of local or general exhaust is recommended to keep employee exposure below the airborne exposure limits. Local exhaust ventilation is generally preferred because it can control the emission at its source and prevent dispersion into the general work area.

Keep good industrial hygiene. Avoid all contact. Do not breathe vapor. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place

Personal Protection Equipment
Respiratory protection: In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment.

Protective gloves: Hand protection: Wear impervious gloves (EN374). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves’ producer.

Skin protection: Body protection: Wear suitable coveralls to prevent exposure to the skin.

Eye protection: Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Additional clothing and/or equipment: Safety shower and eye wash station in local area.
Exposure Guidelines
See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties
Appearance and Physical State: Colorless liquid
Odor: ether-like
Specific Gravity (H₂O=1): 0.9
Vapor Pressure (mm Hg): 129 @ 68°F (20°C)
Vapor Density (air=1): 2.4
Evaporation Rate (butyl acetate=1): 8.0
Boiling Point: 150°F (66°C)
Freezing point / melting point: NA
pH: ND
Volatile Organic Compounds: 598g/liter
Solubility in Water: Appreciable (more than 50%)
Molecular Weight: ND

Section 10: Stability and Reactivity
Stability: Stable under normal conditions of use and storage.
Conditions to Avoid: Heat, flame, other sources of ignition, light and air. Avoid subjecting resin to temperatures above 90°F/32°C due to presence of volatile methyl ethyl ketone.
Materials to Avoid (Incompatibility): Keep away from oxidizing agents, corrosive substances, reducing agents, strong acids, and alkalis.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, explosive peroxides, and phenolic.
Hazardous Polymerization: Will not occur by itself, but masses of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.

Section 11: Toxicological Information
Results of component toxicity test performed:
Tetrahydrofuran
LD50 IPR (Rat) 2900 mg/kg
LD50 Inhal (Rat) 78 g/m³
Epoxy Novolac
LD50 Skin (Rabbit) > 2000 mg/kg
LD50 Oral (Rat) > 4000 mg/kg
Methyl Ethyl Ketone
LD50 Oral (Rat) 2737 mg/kg
LD50 IPR (Mouse) 616 mg/kg
LD50 Skin (Rabbit) 13 g/kg

Skin corrosion/irritation: Skin Irrit. 2: Causes skin irritation.
Serious eye damage/irritation: Eye Irrit. 2: Causes serious eye irritation.
Respiratory or skin sensitization: Skin Sens. 1: May cause an allergic skin reaction.
Germ cell mutagenicity: The classification criteria are not met.
Carcinogenicity: Carc. 2: Suspected of causing cancer.
Reproductive toxicity: The classification criteria are not met.
STOT - single exposure: STOT SE 3: May cause respiratory irritation.
STOT - repeated exposure: The classification criteria are not met.
Aspiration hazard: The classification criteria are not met.
Human experience: ND
This product does contain a compound listed by NTP or IARC or regulated by OSHA as a carcinogen: Tetrahydrofuran (109-99-9).

Section 12: Ecological Information
Ecological Information:
Toxicity: Aquatic Chronic 2: Toxic to aquatic life with long lasting effects. Estimated Mixture LC50 >1 < 10 mg/l (Fish)
Persistence and degradability: Parts of the components are poorly biodegradable.
Bio accumulative potential: The product has low potential for bioaccumulation.
Mobility in soil: The product is predicted to have high mobility in soil.
Results of PBT and vPvB assessment: Not classified as PBT or vPvB.
Chemical Fate Information: ND

Section 13 Disposal Considerations
Waste Disposal Method: This material and its container must be disposed of as hazardous waste. Send after pre-treatment to an appropriate hazardous waste incinerator facility according to legislation for all local, state and federal environmental regulations. Regulations may vary in different locations. 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: Adhesives, containing a flammable liquid Hazard Class: 3
Packaging group: II
UN Number: UN1133
Note: When shipped as Kit the Proper shipping name: Chemical Kits, UN3316, Class 9,
Packaging Group II
IATA: Proper shipping name: Adhesives, containing a flammable liquid
Hazard Class: 3
Packaging group: II
UN Number: UN1133
Note: When shipped as Kit the Proper shipping name: Chemical Kits, UN3316, Class 9,
Packaging Group II
Marine Pollutant: None of components are listed.
Canadian TDG: Adhesives, containing a flammable liquid
or as a Kit: Chemical Kits

Section 15: Regulatory Information
United States Federal Regulations
SARA Title III: This product contains a toxic chemical or chemicals (as listed below) subject to the reporting requirements of Section 313 Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.
Methyl Ethyl Ketone (cas # 78-93-3) 5.3 – 8.9 % by weight.
TSCA: All components of this product are listed in the Toxic Substance Control Act Chemical Substance Inventory (TSCA).
State Regulations
California Proposition 65: Substance not listed.
International Regulations
Canada WHMIS: This product contains materials listed on the CPR Inventory List.
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