

Safety Data Sheet

Product No. 16039 M-BOND™ 610 Adhesive, Kit Component

Issue Date 03-23-15)

Review Date (06-26-15)

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

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 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 (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 Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
Tetrahydrofuran (109-99-9) Ec-No: 203-726-8 Flam. Liq. 2; H225 Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335 Carc. 2; H351 EUH019	45-55	200 ppm 590 mg/m3 STEL 250 ppm* 735 mg/m3*	NE	No	No	Yes
Polyglycidyl Ether of Phenol-Formaldehyde (28064-14-4) Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	30-40	NE	NE	No	No	No
Methyl Ethyl Ketone (78-93-3) EC-No: 201-159-0 Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	5.3-8.9	200 ppm 590 mg/m3 STEL 300 ppm* 885 mg/m3*	NE	No	No	No

***NIOSH 15 minutes average value**

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. H336: May cause drowsiness or dizziness. H351: Suspected of causing cancer. H411: Toxic to aquatic life with long lasting effects. EUH019: May form explosive peroxides. EUH066: Repeated exposure may cause skin dryness or cracking.

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.

Conditions for safe storage: Ground/bond container and receiving equipment. Keep only in original container. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Keep away from direct sunlight.

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/m ³
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

RCRA 40 CFR 261 Classification: Tetrahydrofuran (109-99-9) (I): U213. Methyl ethyl ketone (MEK)(78-93-3): U159 (I, T)

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, Packing Group II

IATA: Proper shipping name: Adhesives, *containing a flammable liquid*

Hazard Class: 3

Packing group: II

UN Number: UN1133

Note: When shipped as Kit the Proper shipping name: Chemical Kits, UN3316, Class 9, Packing 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

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

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.

RCRA: Tetrahydrofuran (109-99-9) (I): U213. Methyl ethyl ketone (MEK)(78-93-3): U159 (I, T)

TSCA: All components of this product are listed in the Toxic Substance Control Act Chemical Substance Inventory (TSCA).

CERCLA: Tetrahydrofuran (109-99-9): RQ = 1000 lbs (454 kg). Methyl ethyl ketone (MEK) (78-93-3): RQ = 5000 lbs (2270 kg).

State Regulations

California Proposition 65: Substance not listed.

International Regulations

Canada WHMIS: This product contains materials listed on the CPR Inventory List.

Europe EINECS Numbers: Tetrahydrofuran (109-99-9): EINECS#: 203-726-8. Methyl ethyl ketone (MEK) (78-93-3): EINECS#: 201-159-0.

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

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