

Safety Data Sheet

Product No. 18032 NMA (Methyl Nadic Anhydride)

Issue Date (03-04-14)

Review Date (12-12-14)

Section 1: Product and Company Identification

Product Name: NMA (Methyl Nadic Anhydride)

Synonym: NMA, (Methyl-5-Norbornene-2, 3-Dicarboxylic Anhydride)

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:



Corrosive



Irritant



Health hazard

GHS Categories:

Hazard statement(s):

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing vapors.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove

contact lenses, if present and easy to do. Continue rinsing.

Health Effects:

NFPA Hazard Rating: Health: 2; Fire: 1; Reactivity: 0

HMIS® Hazard Rating: Health: 2; Fire: 1; Reactivity: 0

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

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

Emergency overview

Appearance: Viscous liquid. Color: light yellow.

Immediate effects:

Potential health effects

Primary Routes of entry: Ingestion, Skin and eye contact, Inhalation of mist or vapors.

Signs and Symptoms of Overexposure: ND

Eyes: Causes serious eye irritation.

Skin: Causes severe skin burns or irritation.

Ingestion: Harmful if swallowed.

Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Chronic Exposure: ND

Chemical Listed As Carcinogen Or Potential Carcinogen: None listed.

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
(NMA) Methyl-5-Norbornene-2,3-Dicarboxylic Anhydride (25134-21-8) EC-No.: 246-644-8	≤ 100	ND	ND	No	No	No

Section 4: First Aid Measures

If accidental overexposure is suspected

General information: 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: In case of unconsciousness place patient stably in side position for transportation.

Ingestion: If swallowed, immediately call a doctor.

Note to physician

Treatment: No further relevant information available.

Medical Conditions generally Aggravated by Exposure: NIF

Section 5: Fire Fighting Measures

Flash Point: 135 °C

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special Fire Fighting Procedures: ND

Unusual Fire and Explosion Hazards: ND

Hazardous combustion products: Oxides of carbon

DOT Class: Corrosive.

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Do not allow to enter sewers/surface or ground water.

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. Keep container tightly closed.

Storage temperature: Store in a cool place.

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required: Use fume hood to keep concentration below exposure limit value.

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 respiratory protective device that is independent of circulating air.

Protective gloves: Wear protective gloves

Skin protection: Wear protect gloves and clothing.

Eye protection: Wear tightly sealed goggles.

Additional clothing and/or equipment: Eye wash station.

Exposure Guidelines

See Composition/Information on Ingredients (Section3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Clear Pale yellow viscous liquid.

Odor (threshold): Slight odor

Specific Gravity (H₂O=1): 1.23 g/cm³ (10.264 lbs/gal)

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: ND
Freezing point / melting point: ND
pH: ND
Solubility in Water: ND
Molecular Weight: ND

Section 10: Stability and Reactivity

Stability: Stable.
Reactivity: No dangerous reactions known.
Conditions to Avoid: ND
Materials to Avoid (Incompatibility): ND
Hazardous Decomposition Products: No dangerous decomposition products known.
Hazardous Polymerization: No dangerous polymerization known.

Section 11: Toxicological Information

Results of component toxicity test performed:
Acute toxicity: LD50 Oral - rat - 914 mg/kg
Remarks: Behavioral: Somnolence (general depressed activity). Kidney, Ureter, Bladder: Hematuria.
Nutritional and Gross Metabolic: Weight loss or decreased weight gain.
LD50 Dermal - rat - 4,290 mg/kg
Remarks: Behavioral: Somnolence (general depressed activity). Lungs, Thorax, or Respiration: Other changes.
Human experience:
Skin corrosion/irritation: No data available
Serious eye damage/eye irritation: No data available
Respiratory or skin sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen. Also see Section 3.

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 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Other adverse effects No further relevant information available.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: ND

Recommendation: 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: Corrosive liquids, n.o.s. (Methyl-5-Norbornene-2,3-

Dicarboxylic Anhydride)

Hazard Class: 8

Packaging group: III

UN Number: UN1760

IATA: Proper shipping name: Corrosive liquids, n.o.s. (Methyl-5-Norbornene-2,3-Dicarboxylic Anhydride)

Hazard Class: 8

Packing group: III

UN Number: UN1760

Marine Pollutant: No

Canadian TDG: Corrosive liquids, n.o.s. (Methyl-5-Norbornene-2,3-Dicarboxylic Anhydride)

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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: Section 355 (extremely hazardous substances): Substance is not listed.

SARA Title III: Section 313 (Specific toxic chemical listings): Substance is not listed.

RCRA: ND

TSCA: Substance is listed.

CERCLA: Not listed

State Regulations

California Proposition 65: Substance is not listed.

Chemicals known to cause cancer: Substance is not listed.

Chemicals known to cause reproductive toxicity for females: Substance is not listed.

Chemicals known to cause reproductive toxicity for males: Substance is not listed.

Chemicals known to cause developmental toxicity: Substance is not listed.

Carcinogenic categories

EPA (Environmental Protection Agency) Substance is not listed.

TLV (Threshold Limit Value established by ACGIH) Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

International Regulations

Product related hazard information:

The product has been classified and marked in accordance with directives on hazardous materials.

Canada WHMIS: ND

Europe EINECS Numbers: 246-644-8

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Section 16: Other Information

Label Information: Harmful, Corrosive.

European Risk and Safety Phrases: Risk phrases: Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation. · Safety phrases: Keep out of the reach of children.

Wear eye/face protection.

European symbols needed:



Harmful and Irritant

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.