

## Safety Data Sheet

**Product No.18310 D.E.R.™ 736 Epoxy Resin**

**Issue Date (04-09-15)**

**Review Date (08-31-17)**

### Section 1: Product and Company Identification

**Product Name: D.E.R.™ 736 Epoxy Resin**

Synonym: Diglycidyl Ether of Poly (propylene glycol), Polymer of epichlorohydrinpolyglycol

**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



GHS07

##### GHS Categories

GHS07: Irritant

Acute Tox. 4

H302: Harmful if swallowed.

Acute Tox. 4

H332: Harmful if inhaled.

Skin Irrit. 2

H315: Causes skin irritation.

Skin Sens. 1

H317: May cause an allergic skin reaction.

#### 2.2 Label elements

##### Hazard Pictograms



GHS07

**Signal Word: Warning**

##### Hazard Statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic reaction.

H332 Harmful if inhaled.

##### Precautionary Statements

|           |   |
|-----------|---|
| P261      | Avoid breathing dust/fume/gas/mist/vapors/spray.  |
| P280      | Wear protective gloves/protective clothing/eye protection/face protection.                          |
| P321      | Specific treatment (see on this label).   |
| P362      | Take off contaminated clothing and wash before reuse.   |
| P301+P312 | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.                                       |
| P501      | Dispose of contents/container in accordance with local/regional/national/international regulations. |

## 2.3 Other hazards

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

#### Label elements

Labeling according to EU guidelines: The product has been classified and marked in accordance with directives on hazardous materials.

Harmful - Harmful by inhalation and if swallowed.

Irritant - Irritating to eyes and skin. May cause sensitization by skin contact.

Information concerning particular hazards for human and environment: NA

#### Code letter and hazard designation of product:

Label: Harmful

#### Risk phrases:

Harmful by inhalation and if swallowed.

Irritating to eyes and skin.

May cause sensitization by skin contact.

#### Safety phrases:

Keep container in a well-ventilated place.

Avoid contact with skin.

Wear suitable gloves.

This material and its container must be disposed of as hazardous waste.

#### Health Effects:

NPFA Hazard Rating: Health: 1; Fire: 0; Reactivity: 0

HMIS® Hazard Rating: Health: 1; Fire: 0; 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: Liquid

Immediate effects: ND

## Potential health effects

Primary Routes of entry: ND

Signs and Symptoms of Overexposure: ND

Eyes: Causes eye irritation.

Skin: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: Harmful if swallowed.

Inhalation: Harmful if inhaled (mist).

Chronic Exposure: ND

See Toxicological Information (Section 11)

## Potential environmental effects

See Ecological Information (Section 12)

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## Section 3: Composition / Information on Ingredients

| Principle Component(s)<br>(chemical and common name(s))<br>(Cas. No) | %    | OSHA<br>PEL<br>mg/m3 | ACGIH<br>TLV<br>mg/m3 | NTP | IARC | OSHA<br>regulated |
|--|------|----------------------|-----------------------|-----|------|-------------------|
| Polymer of epichlorohydrin-<br>polyglycol<br>(41638-13-5)            | ≤100 | NE                   | NE                    | No  | No   | No                |

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## Section 4: First Aid Measures

### If accidental overexposure is suspected

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: If symptoms persist, call a doctor.

### Note to physician

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

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## Section 5: Fire Fighting Measures

Flash Point: 160 °C (320 °F)

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: Use firefighting measures that suit the environment.

Special Fire Fighting Procedures: ND

Advice for firefighters: Use mouth respiratory protective device.

Unusual Fire and Explosion Hazards: Product does not present an explosion hazard.

Hazardous combustion products: Oxides of carbon.

Hazardous decomposition products: None known.

Hazardous polymerization: Will not occur.

DOT Class: NA

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## Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

Environmental Precautions: Dilute with plenty of water. Do not allow to enter sewers/surface or ground water.  
Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

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### **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 receptacle tightly sealed.

Storage temperature: No special requirements.

Storage Pressure: NA

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### **Section 8: Exposure Controls / Personal Protection**

#### **Engineering Controls**

Ventilation required: Use with good ventilation.

#### **Personal Protection Equipment**

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.

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 gloves.

Skin protection: Protective clothing.

Eye protection: Tightly sealed goggles.

Additional clothing and/or equipment: ND

#### **Exposure Guidelines**

See Composition/Information on Ingredients (Section 3)

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### **Section 9 Physical and Chemical Properties**

Appearance and Physical State: White liquid.

Odor (threshold): Ether-like (ND)

Specific Gravity (H<sub>2</sub>O=1): ND

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1):

Boiling Point: 225 °C (437 °F)

Freezing point / melting point: ND

pH: ND

Organic solvents: 0.0 %

Solubility in Water: Fully miscible.

Molecular Weight: ND

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### **Section 10: Stability and Reactivity**

Stability: Stable

Conditions to Avoid: ND

Materials to Avoid (Incompatibility): ND

Hazardous Decomposition Products: No decomposition if used according to specifications.

Hazardous Polymerization: Will not occur.

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### **Section 11: Toxicological Information**

Results of component toxicity test performed: ND

Primary irritant effect:

On the skin: Irritant to skin and mucous membranes.

On the eye: Irritating effect.

Sensitization: Sensitization possible through skin contact.

Human experience: ND

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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## **Section 12: Ecological Information**

Aquatic toxicity: ND

Persistence and degradability: ND

Behavior in environmental systems: ND

Bioaccumulative potential: ND

Mobility in soil: ND

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.

Chemical Fate Information: ND

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## **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.

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## **Section 14: Transportation Information**

US DOT Information: Proper shipping name: Not regulated.

IATA: Proper shipping name: Not regulated.

Marine Pollutant: No

Canadian TDG: Not regulated

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## **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): Substance is not listed.

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

RCRA: ND

TSCA: Substance is listed.

CERCLA: ND

### **State Regulations**

California Proposition 65: 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**

Canada WHMIS: ND

Europe EINECS Numbers: ND

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## **Section 16: Other Information**

Label Information: Irritant.

European Risk and Safety Phrases: See Section 2

European symbols needed: Harmful.

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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**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.

## Safety Data Sheet

**Product No. 18301 Nonenyl Succinic Anhydride, (NSA)**

**Issue Date (04-09-15)**

**Review Date (08-31-17)**

### Section 1: Product and Company Identification

**Product Name: Nonenyl Succinic Anhydride Modified (NSA)**

Synonym: NSA (Nonenyl Succinic Anhydride Modified)

**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)

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**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

Classification according to Regulation (EC) No 1272/2008

#### GHS Pictograms



GHS07

#### GHS Categories

|               |                                      |
|---------------|--------------------------------------|
| Acute Tox. 4  | H302: Harmful if swallowed.          |
| Acute Tox. 4  | H312: Harmful in contact with skin.  |
| Acute Tox. 4  | H332: Harmful if inhaled.            |
| Skin Irrit. 2 | H315: Causes skin irritation.        |
| Eye Irrit. 2  | H319: Causes serious eye irritation. |

#### 2.2 Label Elements



GHS07

**Signal Word: WARNING**

#### Hazard statements

|                |   |
|----------------|---|
| H302+H312+H332 | Harmful if swallowed, in contact with skin or if inhaled. |
| H315           | Causes skin irritation.                                   |
| H319           | Causes serious eye irritation.                            |

#### Precautionary statements

|      |                              |
|------|------------------------------|
| P284 | Wear respiratory protection. |
|------|------------------------------|

|                |  |
|----------------|--|
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P301+P310      | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304+P340      | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                                 |
| P501           | Dispose of contents/container in accordance with local/regional/national/international regulations.                              |

## 2.3 Other Hazards

### Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

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

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R36/38: Irritating to eyes and skin.

Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

### Health effects:

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

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

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

### Emergency overview

Appearance: Yellow liquid

Immediate effects: Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin.

### Potential health effects

Primary Routes of entry: Ingestion, inhalation, and skin and eye contact.

Signs and Symptoms of Overexposure: ND

Eyes: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Skin: Immediately wash with water and soap and rinse thoroughly

Ingestion: Call for a doctor immediately.

Inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness; place patient stably in side position for transportation.

Chronic Exposure: ND

Chemical Listed As Carcinogen Or Potential Carcinogen: No

See Toxicological Information (Section 11)

### Potential environmental effects

See Ecological Information (Section 12)

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## Section 3: Composition / Information on Ingredients

| Principle Component(s)<br>(chemical and common name(s))<br>(Cas. No) | %  | OSHA<br>PEL<br>mg/m3 | ACGIH<br>TLV<br>mg/m3 | NTP | IARC | OSHA<br>regulated |
|--|----|----------------------|-----------------------|-----|------|-------------------|
| Nonenyl Succinic Anhydride   | ND | NE                   | NE                    | No  | No   | No                |



|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| (NSA), Mixture of substances nonhazardous additions.<br>(28928-97-4) |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

Dangerous components: Void

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#### **Section 4: First Aid Measures**

##### **If accidental overexposure is suspected**

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

Skin Contact: Generally the product does not irritate the skin.

Inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Ingestion: Call for a doctor immediately.

##### **Note to physician**

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

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#### **Section 5: Fire Fighting Measures**

Flash Point: 149 °C

Flammable Limits: Not flammable.

Auto-ignition point: Product is not self-igniting.

Fire Extinguishing Media: Use firefighting measures that suit the environment.

Special Fire Fighting Procedures: Mouth respiratory protective device.

Unusual Fire and Explosion Hazards: No further relevant information available.

Hazardous combustion products: ND

DOT Class: None

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#### **Section 6: Accidental Release Measures**

##### **Steps to be taken in Case Material is Released or Spilled**

Personal precautions, protective equipment and emergency procedures: Not required.

Environmental precautions: 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.

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#### **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.

Storage temperature: Room Temperature.

Storage Pressure: ND

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#### **Section 8: Exposure Controls / Personal Protection**

##### **Engineering Controls**

Ventilation required: Use with adequate ventilation.

##### **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: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Skin protection: Wear protective gloves and clothing.

Eye protection: Tightly sealed goggles

Additional clothing and/or equipment: Eye wash station.

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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.

### **Exposure Guidelines**

See Composition/Information on Ingredients (Section 3)

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## **Section 9 Physical and Chemical Properties**

Appearance and Physical State: Yellow liquid

Odor (threshold): Characteristic

Specific Gravity (H<sub>2</sub>O=1): ND

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: 325 °C

Freezing point / melting point: ND

pH: ND

Solubility in Water: Not miscible or difficult to mix.

Molecular Weight: ND

Solvent content: Organic solvents: 0.0 %, Water: 5.0 %

VOC (EC): 0.00 %

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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 dangerous decomposition products known.

Hazardous Polymerization: No dangerous reactions known.

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## **Section 11: Toxicological Information**

Results of component toxicity test performed: Acute toxicity

Human experience:

On the skin: Irritant to skin and mucous membranes.

On the eye: Irritating effect.

Sensitization: No sensitizing effects known.

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

See Section 3.

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## **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.

**Chemical Fate Information:** ND

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### **Section 13 Disposal Considerations**

RCRA 40 CFR 261 Classification: None

Must not be disposed 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.

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### **Section 14: Transportation Information**

US DOT Information: Proper shipping name: Not Regulated

IATA: Proper shipping name: Not Regulated

Canadian TDG: Not Regulated

Marine Pollutant: No

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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): None of the ingredients is listed.

Section 313 (Specific toxic chemical listings): None of the ingredients is listed.

SARA Title III: ND

RCRA: None of the ingredients is listed.

TSCA: All ingredients are listed.

CERCLA: None of the ingredients is listed.

#### **State Regulations**

California Proposition 65: None

#### **International Regulations**

Canada WHMIS: None of the ingredients is listed.

Europe EINECS Numbers: ND

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### **Section 16: Other Information**

Label Information: ND

European Risk and Safety Phrases: See Section 2

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

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### **Disclaimer**

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## Safety Data Sheet

**Product No. 18315 Dimethylaminoethanol (DMAE)**

**Issue Date (04-09-15)**

**Review Date (08-31-17)**

### Section 1: Product and Company Identification

**Product Name: Dimethylaminoethanol (DMAE)**

Synonym: 2- Dimethylaminoethanol

**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



GHS02    GHS05    GHS07

##### GHS Categories

|       |               |   |
|-------|---------------|---|
| GHS02 | Flammable     |   |
|       | Flamm. Liq. 3 | H226: Flammable liquid and vapor              |
| GHS05 | Corrosive     |   |
|       | Skin Corr. 1B | H314: Causes severe skin burns and eye damage |
| GHS07 | Irritant      |   |
|       | Acute Tox. 4  | H302: Harmful if swallowed                    |
|       | Acute Tox. 4  | H312: Harmful in contact with skin            |
|       | Acute Tox. 4  | H332: Harmful if inhaled                      |

**Signal Word: DANGER**

#### 2.2 Label elements

##### Labeling according to EU guidelines

This product has been classified and marked in accordance with GHS guidelines.

##### Hazard-determining components of labeling

2-dimethylaminoethanol

##### Hazard statements

|                |   |
|----------------|---|
| H226           | Flammable liquid and vapor.                               |
| H302+H312+H332 | Harmful if swallowed, in contact with skin or if inhaled. |
| H314           | Causes severe skin burns and eye damage.                  |

##### 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: Not applicable.

vPvB: Not applicable.

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

Corrosive: Causes burns.

Harmful: Harmful by inhalation, in contact with skin and if swallowed.

Flammable

Information concerning particular hazards for human and environment: Not applicable.

Label elements:

Labeling according to EU guidelines:

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

Code letter and hazard designation of product:

Label: Corrosive

### Risk phrases

Flammable.

Harmful by inhalation, in contact with skin and if swallowed.

Causes burns.

### Safety phrases

Keep locked up and out of the reach of children.

Avoid contact with eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection.

### Health Effects

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

HMIS® Hazard Rating: Health: 4; Fire: 3; Reactivity: 0

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

### Emergency overview

Appearance: Colorless liquid

Immediate effects: ND

### Potential health effects

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

Signs and Symptoms of Overexposure: ND

Eyes: Strong caustic effect

Skin: Harmful by contact with skin.

Ingestion: Harmful if swallowed.

Inhalation: Harmful by inhalation.

Chronic Exposure: ND

Chemical Listed As Carcinogen Or Potential Carcinogen:

See Toxicological Information (Section 11)

### Potential environmental effects

See Ecological Information (Section 12)

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## Section 3: Composition / Information on Ingredients

| Principle Hazardous Component(s)<br>(chemical and common name(s))<br>(Cas. No)             | %    | OSHA<br>PEL<br>mg/m3 | ACGIH<br>TLV<br>mg/m3 | NTP | IARC | OSHA<br>regulated |
|--|------|----------------------|-----------------------|-----|------|-------------------|
| 2-dimethylaminoethanol<br>(108-01-0)<br>EC number: 203-542-8<br>Index number: 603-047-00-0 | ≤100 | NE                   | NE                    | No  | No   | No                |

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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.

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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

Ingestion: Immediately call a doctor. Drink copious amounts of water and provide fresh air.

### Note to physician

Information for doctor: Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed: No further relevant information available

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

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## Section 5: Fire Fighting Measures

Flash Point: 31 °C (88 °F)

Flammable Limits: ND

Ignition temperature: 220 °C (428 °F)

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: No further relevant information available.

Advice for firefighters: Protective equipment: Mouth respiratory protective device.

Unusual Fire and Explosion Hazards: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Hazardous combustion products: Oxides of Carbon and Nitrogen.

DOT Class: Corrosive, Flammable.

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## Section 6: Accidental Release Measures

### Steps to be taken in case material is released or spilled

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.

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## **Section 7: Handling and Storage**

Precautions to be taken in Handling and Storage: Ensure good ventilation/exhaustion at the workplace. Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep receptacle tightly sealed.

Protect from direct heat and sunlight.

Storage temperature: No special requirements.

Storage Pressure: NA

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## **Section 8: Exposure Controls / Personal Protection**

### **Engineering Controls**

Ventilation required: Use in chemical fume hood.

### **Personal Protection Equipment**

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.

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. The glove material has to be impermeable and resistant to the product/substance/preparation.

Skin protection: Wear gloves and protective clothing.

Eye protection: Tightly sealed goggles.

Additional clothing and/or equipment: ND

### **Exposure Guidelines**

See Composition/Information on Ingredients (Section 3)

---

## **Section 9 Physical and Chemical Properties**

Appearance and Physical State: Colorless liquid.

Odor (threshold): Ammonia-like (ND)

Specific Gravity (H<sub>2</sub>O=1): 0.89 g/cm<sup>3</sup> (7.427 lbs/gal)

Vapor Pressure (mm Hg): 5.6 hPa (4 mm Hg)

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: 133 °C (271 °F)

Melting point: <-70 °C (<-94 °F)

pH: ND

Solubility in Water: Fully miscible.

Molecular Weight: ND

---

## **Section 10: Stability and Reactivity**

Stability: Stable

Conditions to Avoid: Avoid flame and sparks

Materials to Avoid (Incompatibility): No further relevant information available.

Hazardous Decomposition Products: No dangerous decomposition products known

Hazardous Polymerization: No dangerous reactions known.

---

## **Section 11: Toxicological Information**

Results of component toxicity test performed:

Acute toxicity: LD/LC50 values that are relevant for classification: 108-01-0, 2-dimethylaminoethanol

|                     |                     |
|---------------------|---------------------|
| Oral LD50           | 2000 mg/kg (rat)    |
| Dermal LD50         | 1370 mg/kg (rabbit) |
| Inhalative LC50/4 h | 3.25 mg/l (mouse)   |

Primary irritant effect:

On the skin: Caustic effect on skin and mucous membranes.

On the eye: Strong caustic effect.

Sensitization: No sensitizing effects known.

Additional toxicological information: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic categories:

IARC (International Agency for Research on Cancer): Substance is not listed.

NTP (National Toxicology Program): Substance is not listed.

Human experience: ND

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

---

## Section 12: Ecological Information

Toxicity:

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 (Assessment by list): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized.

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: 2-Dimethylaminoethanol

Hazard Class: 8 (3)

Packaging group: II

UN Number: UN2051

IATA: Proper shipping name: 2-Dimethylaminoethanol

Hazard Class: 8 (3)

Packing group: II

UN Number: UN2051

Marine Pollutant: No

Canadian TDG: 2-Dimethylaminoethanol

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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: No

### **State Regulations**

California Proposition 65:

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**

Canada WHMIS: ND

Europe EINECS Numbers: See Section 3.

---

## **Section 16: Other Information**

Label Information: Corrosive, Flammable.

European Risk and Safety Phrases: See Section 2.

European symbols needed: Corrosive, Harmful.

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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## **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.

## Safety Data Sheet

**Product No. 18306-4221 ERL 4221 Epoxide Resin**

**Issue Date (04-09-15)**

**Review Date (08-31-17)**

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### Section 1: Product and Company Identification

**Product Name: ERL 4221 Epoxide Resin**

**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**

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### Section 2: Hazard Identification

#### 2.1 Classification of the substance or mixture

##### GHS Pictograms



GHS07

##### GHS Categories

GHS07: Irritant

Skin Sens. 1

H317: May cause an allergic skin reaction.

#### 2.2 Label elements

##### Hazard Pictograms



GHS07

**Signal Word:** Warning

**Hazard-determining components of labeling:** 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethylester

##### Hazard Statements

H317 May cause an allergic skin reaction.

##### Precautionary Statements

P261 Avoid breathing dust/fumes/mist/vapors/spray.

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

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## 2.3 Other hazards

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

Irritant: May cause sensitisation by skin contact.

Information concerning particular hazards for human and environment: The product has to be labeled due to the calculation procedure of international guidelines.

Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

### Label elements

Labeling according to EU guidelines: The product has been classified and marked in accordance with directives on hazardous materials.

Code letter and hazard designation of product: Irritant.

Hazard-determining components of labeling:

7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester.

### Risk phrases:

May cause sensitisation by skin contact.

### Safety phrases:

Do not breathe gas/fumes/vapor/spray (appropriate wording to be specified by the manufacturer).

Avoid contact with skin.

Wear suitable gloves.

This material and its container must be disposed of as hazardous waste.

### Health Effects:

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

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

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

**Results of PBT and vPvB assessment:** A Chemical Safety Assessment has not been carried out.

PBT: NA

vPvB: NA

### Emergency overview

Appearance: Colorless liquid.

Immediate effects: ND

### Potential health effects

Primary Routes of entry: Ingestion, inhalation, eye and skin contact.

Signs and Symptoms of Overexposure: ND

Eyes: ND

Skin: May cause sensitisation by skin contact.

Ingestion: ND

Inhalation: ND

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)<br>(chemical and common name(s))<br>(Cas. No)  | %      | OSHA PEL<br>mg/m3 | ACGIH TLV<br>mg/m3 | NTP | IARC | OSHA regulated |
|---|--------|-------------------|--------------------|-----|------|----------------|
| 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethylester (2386-87-0)<br>Skin Sens. 1: H317 | 50-100 | ND                | ND                 | No  | No   | No             |

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#### Section 4: First Aid Measures

##### If accidental overexposure is suspected

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

##### Note to physician

Treatment: No further relevant information available.  
Medical Conditions generally Aggravated by Exposure: ND

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#### Section 5: Fire Fighting Measures

Flash Point: 118 °C  
Flammable Limits: ND  
Auto-ignition point: NA  
Fire Extinguishing Media: Use firefighting measures that suit the environment.  
Special Fire Fighting Procedures: ND  
Unusual Fire and Explosion Hazards: Product does not present an explosion hazard.  
Hazardous combustion products: ND  
DOT Class: None

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#### Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: 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.  
Storage temperature: Room temperature.  
Storage Pressure: NA

---

#### Section 8: Exposure Controls / Personal Protection

##### Engineering Controls

Ventilation required: Use with good ventilation.

##### Personal Protection Equipment

General protective and hygienic measures: Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.  
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.

Skin protection: Wear gloves and protective clothing as required.

Eye protection: Goggles recommended.

Additional clothing and/or equipment: ND

### **Exposure Guidelines**

See Composition/Information on Ingredients (Section 3)

---

### **Section 9 Physical and Chemical Properties**

Appearance and Physical State: Colorless liquid

Odor (threshold): Odorless (NA)

Specific Gravity (H<sub>2</sub>O=1): ND

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: > 250 °C

Freezing point / melting point: ND

pH: ND

Organic solvents: 0.0 %

Solubility in Water: Not miscible or difficult to mix.

Molecular Weight: ND

---

### **Section 10: Stability and Reactivity**

Stability: Stable

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Conditions to avoid: ND

Incompatible materials: ND

Hazardous decomposition products: None known.

Hazardous Polymerization: None known.

---

### **Section 11: Toxicological Information**

Results of component toxicity test performed: ND

Primary irritant effect: None

Sensitization: Sensitization possible through skin contact.

Human experience: ND

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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### **Section 12: Ecological Information**

Aquatic toxicity: ND

Persistence and degradability: ND

Bioaccumulative potential: ND

Mobility in soil: ND

Chemical Fate Information: ND

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### **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.

IATA: Proper shipping name: Not regulated.

Marine Pollutant: No

Canadian TDG: Not regulated.

---

## **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): None of the ingredients is listed.

SARA Title III: Section 313 (Specific toxic chemical listings): None of the ingredients is listed

RCRA: ND

TSCA (Toxic Substances Control Act):

2386-87-0, 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester.

2611-00-9, 3-Cyclohexene-1-carboxylic acid, 3-cyclohexen-1-ylmethyl ester.

CERCLA: None listed.

### **State Regulations**

California Proposition 65: None of the ingredients is listed.

### **Canadian substance listings:**

Canadian Domestic Substances List (DSL):

2386-87-0, 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester.

2611-00-9, 3-Cyclohexene-1-carboxylic acid, 3-cyclohexen-1-ylmethyl ester.

Canadian Ingredient Disclosure list (limit 0.1%): None of the ingredients is listed.

### **International Regulations**

Canada WHMIS: D2B - Toxic material causing other toxic effects.

Europe EINECS Numbers: ND

---

## **Section 16: Other Information**

Label Information: Irritant.

European Risk and Safety Phrases: See Section 2

European symbols needed: Irritant

Canadian WHMIS Symbols: 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

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