**Material Safety Data Sheet**

**Material Name:** MAPEWRAP 31 - Part A  
**Product Use:** Adhesive  

**Manufacturers Information**  
USA and Puerto Rico | Canada  
MAPEI | MAPEI  
1144 East Newport Center Drive | 2900 Francis-Hughes Avenue  
Deerfield Beach, FL 33442 | Laval, QC H7L 3J5  
Phone: 1-954-246-8888 | Phone: 1-450-662-1212  

**Section 1 - Chemical Product and Company Identification**

**Section 2 - Hazards Identification**

**Emergency Overview**
This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Yellow liquid. Epoxy odor. This product is irritating to the eyes and skin. May cause sensitization by skin contact.

**Hazard Statements**
CAUTION! IRRITANT. ALLERGEN. MAY IRRITATE EYES. MAY IRRITATE SKIN. May cause sensitization by skin contact. Wear suitable gloves and eye/face protection. Wear suitable protective clothing. Keep out of the reach of children.

**Potential Health Effects: Eyes**
This product may cause irritation to the eyes. This product may cause irritation that may last for over 24 hours. Symptoms can include irritation, redness, scratching of the cornea, and tearing.

**Potential Health Effects: Skin**
This product may cause irritation to the skin. Prolonged or repeated skin contact may cause skin irritation or allergic skin sensitization reaction. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Potential Health Effects: Ingestion**
Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

**Potential Health Effects: Inhalation**
This product may cause irritation to the respiratory system.

**Medical Conditions Aggravated by Exposure**
Hypersensitivity to product, allergies, and skin or respiratory disorders

**Potential Environmental Effects**
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Material Safety Data Sheet

Material Name: MAPEWRAP 31 - Part A

HMIS Ratings: Health: 2 Fire: 1 Reactivity: 0 Pers. Prot.: Safety goggles, gloves, synthetic apron
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>25068-38-6</td>
<td>Epoxy Resin</td>
<td>60-100</td>
</tr>
<tr>
<td>28064-14-4</td>
<td>Epoxy resin</td>
<td>15-40</td>
</tr>
<tr>
<td>16096-31-4</td>
<td>1,6-Hexanediol diglycidyl ether</td>
<td>15-40</td>
</tr>
</tbody>
</table>

*** Section 4 - First Aid Measures ***

First Aid: Eyes
Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

First Aid: Skin
Immediately take off all contaminated clothing. Flush with large amounts of water. If irritation persists, get medical attention.

First Aid: Ingestion
Flush out mouth with water. If ingestion of a large amount does occur, seek medical attention. Do not induce vomiting.

First Aid: Inhalation
Immediately remove the affected person to fresh air. If symptoms persist, get medical attention.

First Aid: Notes to Physician
Provide general supportive measures and treat symptomatically.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards
See Section 9 for Flammability Properties.
Closed containers may rupture due to a build-up of pressure when exposed to extreme heat.

Hazardous Combustion Products
Irritating and toxic gases or fumes may be released during a fire. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Extinguishing Media
Dry chemical (preferred), foam, water.

Unsuitable Extinguishing Media
None identified.

Specific Hazards Arising From the Chemical
None identified.

Fire Fighting Equipment/Instruction
Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA Ratings: Health: 2 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
*** Section 6 - Accidental Release Measures ***

Containment Procedures
Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. Scoop up used absorbent into drums or other appropriate container.

Personal Precautions
Wear appropriate protective equipment and clothing during clean-up.

Environmental Precautions
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Clean-Up Procedures
 Attempt to reclaim the free product, if this is possible. Shovel the material into waste container. Thoroughly wash the area with water after a spill or leak clean-up. Wear appropriate protective equipment and clothing during clean-up.

Evacuation Procedures
None identified.

Special Procedures
Regulations vary. Consult local authorities before disposal.

*** Section 7 - Handling and Storage ***

Handling Procedures
Do not get in eyes. Do not get on skin or clothing. Keep out of the reach of children. Use this product with adequate ventilation. Wash hands after handling and before eating.

Storage Procedures
Store at ambient temperature and atmospheric pressure. Store away from strong oxidizers.

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits
ACGIH, OSHA, NIOSH or the provinces of Canada have not developed exposure limits for any of this product's components.

Engineering Controls
Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face
Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin
The use of nitrile-latex gloves is recommended. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. Replace ripped or damaged gloves immediately. May cause sensitization by skin contact.

Personal Protective Equipment: Respiratory
Not normally needed.

Personal Protective Equipment: General
Launder contaminated clothing before reuse. Use good industrial hygiene practices in handling this material. Eye wash fountain and emergency showers are recommended.
**Section 9 - Physical & Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow liquid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>NA</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>NA</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>insoluble</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>NA</td>
</tr>
<tr>
<td>Octanol/H2O Coeff.:</td>
<td>NA</td>
</tr>
<tr>
<td>Flash Point Method:</td>
<td>NA</td>
</tr>
<tr>
<td>Lower Flammability Limit (LFL):</td>
<td>NA</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>NA</td>
</tr>
<tr>
<td>Odor</td>
<td>Epoxy odor</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>NA</td>
</tr>
<tr>
<td>Melting Point</td>
<td>NA</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.05 (23°C)</td>
</tr>
<tr>
<td>VOC</td>
<td>TBD</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;100°C</td>
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<tr>
<td>Upper Flammability Limit (UFL):</td>
<td>NA</td>
</tr>
<tr>
<td>Burning Rate</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Physical Properties: Additional Information**

The data provided in this section is to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

**Section 10 - Chemical Stability & Reactivity Information**

**Chemical Stability**

This is a stable material.

**Chemical Stability: Conditions to Avoid**

Do not freeze.

**Incompatibility**

This product may react with strong oxidizing agents.

**Hazardous Decomposition**

Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

**Possibility of Hazardous Reactions**

Will not occur.

**Section 11 - Toxicological Information**

**Acute Dose Effects**

**A: General Product Information**

No information available for the product.

**B: Component Analysis - LD50/LC50**

Epoxy Resin (25068-38-6)

Oral LD50 Rat 11400 mg/kg

**Carcinogenicity**

**A: General Product Information**

No information available for the product.

**B: Component Carcinogenicity**

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

**Sensitization**

This product may be sensitizing by prolonged skin contact.
*** Section 12 - Ecological Information ***

Ecotoxicity
A: General Product Information
   No information available for the product.
B: Component Analysis - Ecotoxicity - Aquatic Toxicity
   No ecotoxicity data are available for this product’s components.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions
A: General Product Information
   No additional information available.
B: Component Waste Numbers
   No EPA Waste Numbers are applicable for this product’s components.

Disposal Instructions
Waste must be handled in accordance with all federal, state, provincial, and local regulations. Consult authorities before disposal.
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

DOT Information
Shipping Name: Environmentally hazardous substances, liquid, n.o.s. (Epoxy Resin)
UN/NA #: UN3082  Hazard Class: 9  Packing Group: III
Additional Info.: Marine Pollutant.

IMDG Information
Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)
UN #: UN3082  Hazard Class: 9  Packing Group: III
Additional Info.: Limited Quantity exemptions apply when inner packagings contain a maximum net capacity of 5 liters. Marine Pollutant.

TDG Information
Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)
UN/NA #: UN3082  Hazard Class: 9  Packing Group: III
Additional Info.: Marine Pollutant.

*** Section 15 - Regulatory Information ***

US Federal Regulations
A: General Product Information
   All of the components of this product are listed on, or are exempted from listing on the U.S. EPA TSCA Inventory of Chemical Substances. All components of this product are included, or are exempt from inclusion, in the Canadian Domestic Substance List unless otherwise noted.
B: Component Analysis
   None of this product’s components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).
State Regulations
A: General Product Information
   Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State
   None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Canadian WHMIS Information
A: General Product Information

B: Component Analysis - WHMIS IDL
   No components are listed in the WHMIS IDL.

Additional Regulatory Information
A: General Product Information
   Supplier(s) of proprietary component(s) state that these components are contained on the TSCA inventory.

B: Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>CAN</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy Resin</td>
<td>25068-38-6</td>
<td>Yes</td>
<td>DSL</td>
<td>No</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>28064-14-4</td>
<td>Yes</td>
<td>DSL</td>
<td>No</td>
</tr>
<tr>
<td>1,6-Hexanediol diglycidyl ether</td>
<td>16096-31-4</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
</tbody>
</table>

*** Section 16 - Other Information ***

Other Information

Disclaimer: Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

MSDS History
This MSDS has been revised in the following section(s):
Section 3 - Composition / Information on Ingredients
Section 16 - Other Information
Material Safety Data Sheet

Material Name: MAPEWRAP 31 - Part A

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; BLV=Biological Limit Values; CAN = Canadian DSL and NDSL Inventories status; CAS = Chemical Abstracts Service; CC = Closed Cup; CFR = Code of Federal Regulations; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; g/L = grams per Liter; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; mg/kg = milligrams per kilogram; mg/L = milligrams per Liter; mg/m3 = milligrams per Cubic Meter; NA, N/A, S.O. = Not available or Not Applicable; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; OC = Open Cup; OSHA = Occupational Safety and Health Administration; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average; TWAEV = Time Weighted Average Exposure Value; WHMIS = Workplace Hazardous Materials Information System

Contact:  Product Safety Representative
Contact Phone:  1-954-246-8888

End of Sheet NW000010
Material Safety Data Sheet

Material Name: MAPEWRAP 31 - Part B

*** Section 1 - Chemical Product and Company Identification ***

Material Name: MAPEWRAP 31 - Part B
Product Use
Hardener for epoxy products.

Manufacturer Information
USA and Puerto Rico Canada
MAPEI MAPEI
1144 East Newport Center Drive 2900 Francis-Hughes Avenue
Deerfield Beach, FL 33442 Laval, QC H7L 3J5
Phone: 1-954-246-8888 Phone: 1-450-662-1212

IN THE EVENT OF A CHEMICAL EMERGENCY INVOLVING A SPILL, LEAK, FIRE, EXPLOSION, EXPOSURE OR ACCIDENT, CONTACT THE FOLLOWING NUMBERS:

Emergency 24 hour numbers:
(USA) CHEMTREC 1-800-424-9300
(Canada) CANUTEC 1-613-996-6666

*** Section 2 - Hazards Identification ***

Emergency Overview
This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication). Colorless liquid. Slight ammonia odor. Contact with this material will cause irritation and burns to the skin and eyes. May cause sensitization by skin contact. This product is harmful by inhalation and if it is swallowed.

Hazard Statements
DANGER! CORROSIVE. ALLERGEN. Causes burns to the skin and eyes. This product may cause sensitization by skin contact. This product is harmful by inhalation and if it is swallowed. Vapor harmful. Wear suitable gloves, eye/face protection, and respiratory protection if needed. Wear suitable protective clothing. Keep out of the reach of children.

Potential Health Effects: Eyes
This product is severely irritating to the eyes and may cause eye burns. Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Potential Health Effects: Skin
This product is severely irritating to the skin and may cause burns. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Prolonged contact with this product may cause allergic skin sensitization reactions.

Potential Health Effects: Ingestion
This product is harmful if swallowed.

Potential Health Effects: Inhalation
This product is harmful by inhalation.

Medical Conditions Aggravated by Exposure
Hypersensitivity to product, allergies, and skin or respiratory disorders
Material Safety Data Sheet

Material Name: MAPEWRAP 31 - Part B

Potential Environmental Effects
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

HMIS Ratings: Health: 3 Fire: 1 Physical Hazard: 0 Pers. Prot.: Safety goggles, gloves, synthetic apron, vapor respirator if airborne concentrations exceed exposure limit
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe  * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1477-55-0</td>
<td>1,3-Benzenedimethanamine</td>
<td>60-100</td>
</tr>
<tr>
<td>68062-29-1</td>
<td>Polyamido Amine</td>
<td>10-30</td>
</tr>
<tr>
<td>61788-44-1</td>
<td>Phenol, styrenated</td>
<td>3-7</td>
</tr>
<tr>
<td>38640-62-9</td>
<td>Diisopropylnapthalene</td>
<td>3-7</td>
</tr>
<tr>
<td>112-24-3</td>
<td>Triethylenetetramine</td>
<td>1-5</td>
</tr>
</tbody>
</table>

*** Section 4 - First Aid Measures ***

First Aid: Eyes
Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

First Aid: Skin
Get medical attention or advice. Flush with large amounts of water.

First Aid: Ingestion
Get medical attention or advice. Flush out mouth with water. Do not induce vomiting.

First Aid: Inhalation
Immediately remove the affected person to fresh air. If symptoms persist, get medical attention.

First Aid: Notes to Physician
Provide general supportive measures and treat symptomatically.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards
See Section 9 for Flammability Properties.
Closed containers may rupture due to a build-up of pressure when exposed to extreme heat.

Hazardous Combustion Products
Irritating and toxic gases or fumes may be released during a fire. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Extinguishing Media
Dry chemical (preferred), foam, water.

Unsuitable Extinguishing Media
None identified.

Specific Hazards Arising From the Chemical
None identified.

Fire Fighting Equipment/Instructions
Firefighters should wear full protective clothing including self contained breathing apparatus.
**Section 6 - Accidental Release Measures**

**Personal Precautions**
Wear appropriate protective equipment and clothing during clean-up.

**Containment Procedures**
Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. Scoop up used absorbent into drums or other appropriate container.

**Environmental Precautions**
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

**Clean-Up Procedures**
Attempt to reclaim the free product, if this is possible. Shovel the material into waste container. Thoroughly wash the area with water after a spill or leak clean-up. Keep out of the reach of children.

**Evacuation Procedures**
None identified.

**Special Procedures**
Regulations vary. Consult local authorities before disposal.

**Section 7 - Handling and Storage**

**Handling Procedures**
Do not swallow. Do not get in eyes. Do not get on skin or clothing. Do not breathe gas/fumes/vapor/spray. Wash hands after handling and before eating. Keep out of the reach of children.

**Storage Procedures**
Store in a cool, dry, well-ventilated area. Store at ambient temperature and atmospheric pressure. Store away from strong oxidizers.
**Section 8 - Exposure Controls / Personal Protection**

### A: Component Exposure Limits

**1,3-Benzenedimethanamine** (1477-55-0)

- **ACGIH:** 0.1 mg/m³ Ceiling
  - Skin - potential significant contribution to overall exposure by the cutaneous route
- **OSHA:** 0.1 mg/m³ Ceiling
  - Prevent or reduce skin absorption
- **NIOSH:** 0.1 mg/m³ Ceiling
  - Potential for dermal absorption
- **Alberta:** 0.1 mg/m³ Ceiling
  - Substance may be readily absorbed through intact skin
- **British Columbia:** 0.1 mg/m³ Ceiling
  - Skin notation
- **Manitoba:** 0.1 mg/m³ Ceiling
- **New Brunswick:** 0.1 mg/m³ Ceiling
  - Skin - potential for cutaneous absorption
- **NW Territories:** 0.1 mg/m³ Ceiling
- **Nova Scotia:** 0.1 mg/m³ Ceiling
  - Skin - potential significant contribution to overall exposure by the cutaneous route
- **Nunavut:** 0.1 mg/m³ Ceiling
- **Ontario:** 0.1 mg/m³ Ceiling
  - Absorption through skin, eyes, or mucous membranes
- **Quebec:** 0.1 mg/m³ Ceiling
  - Skin designation
- **Saskatchewan:** 0.1 mg/m³ Ceiling
- **Yukon:** 0.1 mg/m³ Ceiling

**Triethylenetetramine** (112-24-3)

- **Ontario:** 0.5 ppm TWA; 3 mg/m³ TWA
  - Absorption through skin, eyes, or mucous membranes

### Engineering Controls

Use general ventilation.

### PERSONAL PROTECTIVE EQUIPMENT

**Personal Protective Equipment: Eyes/Face**

- Wear chemical goggles; face shield (if splashing is possible).

**Personal Protective Equipment: Skin**

- The use of nitrile-latex gloves is recommended. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. Replace ripped or damaged gloves immediately. May cause sensitization by skin contact.

**Personal Protective Equipment: Respiratory**

- If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

**Personal Protective Equipment: General**

- Launder contaminated clothing before reuse. Use good industrial hygiene practices in handling this material.
** Section 9 - Physical & Chemical Properties **

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight ammonia odor</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH</td>
<td>11</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt;0.01 kPa (23°C)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;200°C</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>Partially soluble</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>NA</td>
</tr>
<tr>
<td>Octanol/H2O Coeff.</td>
<td>NA</td>
</tr>
<tr>
<td>Flash Point Method</td>
<td>NA</td>
</tr>
<tr>
<td>Lower Flammability Limit (LFL)</td>
<td>NA</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>NA</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.06</td>
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<tr>
<td>Flash Point</td>
<td>&gt;100°C</td>
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<tr>
<td>Upper Flammability Limit (UFL)</td>
<td>NA</td>
</tr>
<tr>
<td>Burning Rate</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>NA</td>
</tr>
<tr>
<td>Melting Point</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Physical Properties: Additional Information**

The data provided in this section is to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

** Section 10 - Chemical Stability & Reactivity Information **

**Chemical Stability**

Stable under normal conditions.

**Chemical Stability: Conditions to Avoid**

Do not freeze.

**Incompatibility**

This product may react with strong acids, bases and oxidizing agents. This product may react with strong reducing agents. This product may react with metals, halogens.

**Hazardous Decomposition**

Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. Upon decomposition, this product may emit fumes of carbon monoxide, carbon dioxide, oxides of nitrogen, and other organic compounds.

**Possibility of Hazardous Reactions**

Will not occur.

** Section 11 - Toxicological Information **

**Acute Dose Effects**

**A: General Product Information**

No information available for the product.

**B: Component Analysis - LD50/LC50**

- **1,3-Benzenedimethanamine (1477-55-0)**
  - Inhalation LC50 Rat 700 ppm 1 h; Oral LD50 Rat 930 mg/kg; Dermal LD50 Rabbit 2000 mg/kg

- **Phenol, styrenated (61788-44-1)**
  - Oral LD50 Rat 2500 mg/kg; Dermal LD50 Rabbit >7940 mg/kg
Diisopropynaphthalene (38640-62-9)
Inhalation LC50 Rat >5.64 mg/L 4 h; Oral LD50 Rat 3900 mg/kg; Dermal LD50 Rat >4500 mg/kg

Triethylenetetramine (112-24-3)
Oral LD50 Rat 2500 mg/kg; Dermal LD50 Rabbit 550 mg/kg

Corrosivity
Contact with this material will cause irritation and burns to the skin and eyes.

Carcinogenicity
A: General Product Information
No information available for the product.

B: Component Carcinogenicity
None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Sensitization
This product may be sensitizing by prolonged skin contact or inhalation.

Ecotoxicity

A: General Product Information
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Diisopropynaphthalene (38640-62-9)

<table>
<thead>
<tr>
<th>Test &amp; Species</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 Hr LC50 Cyprinus carpio</td>
<td>&gt;1000 mg/L [static]</td>
</tr>
<tr>
<td>96 Hr LC50 Oryzias latipes</td>
<td>&gt;1000 mg/L [static]</td>
</tr>
<tr>
<td>24 Hr EC50 Daphnia magna</td>
<td>2.3 mg/L</td>
</tr>
</tbody>
</table>

Triethylenetetramine (112-24-3)

<table>
<thead>
<tr>
<th>Test &amp; Species</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 Hr LC50 Poecilia reticulata</td>
<td>570 mg/L [semi-static]</td>
</tr>
<tr>
<td>96 Hr LC50 Pimephales promelas</td>
<td>495 mg/L</td>
</tr>
<tr>
<td>72 Hr EC50 Desmodesmus subspicatus</td>
<td>2.5 mg/L</td>
</tr>
<tr>
<td>72 Hr EC50 Pseudokirchneriella subcapitata</td>
<td>20 mg/L</td>
</tr>
<tr>
<td>96 Hr EC50 Pseudokirchneriella subcapitata</td>
<td>3.7 mg/L</td>
</tr>
<tr>
<td>48 Hr EC50 Daphnia magna</td>
<td>31.1 mg/L</td>
</tr>
</tbody>
</table>

Disposal Considerations

US EPA Waste Number & Descriptions
A: General Product Information
No additional information available.

B: Component Waste Numbers
No EPA Waste Numbers are applicable for this product's components.
Material Safety Data Sheet

Material Name: MAPEWRAP 31 - Part B

ID: NW000011

Disposal Instructions
Waste must be handled in accordance with all federal, state, provincial, and local regulations. Consult authorities before disposal.
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

DOT Information
Shipping Name: Amines, liquid, corrosive, n.o.s. (Triethylenetetramine, 1,3-Benzenedimethanamine)
UN/NA #: UN2735 Hazard Class: 8 Packing Group: III
Additional Info.: Limited Quantity exemptions apply when inner packagings contain a maximum net capacity of 5 liters.

IMDG Information
Shipping Name: Amines, liquid, corrosive, n.o.s. (Triethylenetetramine, 1,3-Benzenedimethanamine)
UN #: UN2735 Hazard Class: 8 Packing Group: III
Additional Info.: Limited Quantity exemptions apply when inner packagings contain a maximum net capacity of 5 liters.

TDG Information
Shipping Name: Amines, liquid, corrosive, n.o.s. (Triethylenetetramine, 1,3-Benzenedimethanamine)
UN/NA #: UN2735 Hazard Class: 8 Packing Group: III
Additional Info.: Limited Quantity exemptions apply when inner packagings contain a maximum net capacity of 5 liters.

*** Section 15 - Regulatory Information ***

US Federal Regulations
A: General Product Information
All of the components of this product are listed on, or are exempted from listing on the U.S. EPA TSCA Inventory of Chemical Substances. All components of this product are included, or are exempt from inclusion, in the Canadian Domestic Substance List unless otherwise noted.

B: Component Analysis
None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations
A: General Product Information
Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

Material Name: MAPEWRAP 31 - Part B

ID: NW000011

Canadian WHMIS Information

A: General Product Information

D2B, E

B: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
<td>1 %</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>0.1 %</td>
</tr>
</tbody>
</table>

Additional Regulatory Information

A: General Product Information

Supplier(s) of proprietary component(s) state that these components are contained on the TSCA inventory.

B: Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>CAN</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Polyamido Amine</td>
<td>68082-29-1</td>
<td>Yes</td>
<td>DSL</td>
<td>No</td>
</tr>
<tr>
<td>Phenol, styrenated</td>
<td>61788-44-1</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Diisopropylphthalene</td>
<td>38640-62-9</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
</tbody>
</table>

*** Section 16 - Other Information ***

Reference

3059-51

Other Information

Disclaimer: Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

MSDS History

This MSDS has been revised in the following section(s):
Section 3 - Composition / Information on Ingredients
Section 16 - Other Information