Safety Data Sheet

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: 1057 DecoFinish E57 Part A
Application of the substance / the preparation: Modified Epoxy Resin

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:
Thermal-Chem Corporation
2550 Edgington St
Franklin Park, IL 60131 USA
Tel (800) 635-3773

1.4 Emergency contact: CHEMTREC® (800) 424-9300

2 Hazards identification

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008: The product is classified and labeled according to the CLP regulation.

GHS07 GHS02

Signal word: Danger Warning

Hazard-determining components of labeling:
3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazodine
Isoamyl methyl ketone
N-Ethylethanolamine
1,2 Propanediol carbonate
Tert-Butyl acetate
Tert-Butyl alcohol
2,4,5-Trimethyl-1-pentene1-methoxy-2-acetoxypropane

Hazard Statements:
H225 Highly flammable liquid and vapor
H226 Flammable liquid and vapor
H227 Combustible liquid
H233 Keep container tightly closed
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H319 Causes serious eye damage
H332 Harmful if inhaled
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H400 Very toxic to aquatic life
H402 Harmful to aquatic life

(Cont. on page 2)
Precautionary Statements:
P210  Keep away from heat/sparks/open flame/hot surfaces.  No smoking
P233  Keep container tightly closed
P240  Ground/bond container and receiving equipment
P241  Use explosion-proof electrical/ventilating/lighting/equipment
P242  Use only non-sparking tools
P243  Take precautionary measures against static discharge
P261  Avoid breathing dust/fume/gas/mist/vapors/spray
P264  Wash thoroughly after handling
P270  Do not eat, drink or smoke when using this product
P271  Use only outdoors or in a well-ventilated area
P280  Wear protective gloves/protective clothing/eye protection/face protection

Response statements:
P301+P312  IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell
P303+P361+P353  IF ON SKIN (or hair): Take off immediately all contaminated clothing.  Rinse skin with water/shower
P304+P340  IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes.  Remove contact lenses if present and easy to do.  Continue advice/attention
P312  Call a POISON CENTER or doctor/physician if you feel unwell
P330  Rinse mouth
P337+P313  If eye irritation persists: Get medical attention/advice
P370+P378  In case of fire: Use appropriate method to extinguish

Storage statements:
P403+P233  Store in a well ventilated place.  Keep container tightly closed
P403+P235  Store in a well ventilated place.  Keep cool.
P405  Store locked up
P501  Dispose of contents/container in accordance with local/regional/national/international regulations

Hazard description:
WHMIS-symbols:
No information

Canadian WHMIS Classification:
No information

NFPA ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

HMIS-ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

2.3 Other hazards:
Repeated exposure may cause skin dryness or cracking

Results of PBT and vPvB assessment PBT: Not applicable.
vPvB: Not applicable
<table>
<thead>
<tr>
<th><strong>3 Composition/Information on Ingredients</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1 Mixtures</strong></td>
</tr>
<tr>
<td><strong>Description:</strong> Mixture of substances listed below. <strong>Dangerous components:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impurities and stabilising additives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 540-88-5 Tert-Butyl acetate</td>
</tr>
<tr>
<td>Xi R41; Xi R37; Xi R38</td>
</tr>
<tr>
<td>Serious eye damage 2A, H319</td>
</tr>
<tr>
<td>Resp. Irrit 3, H335</td>
</tr>
<tr>
<td>Skin Corr. 2, H315</td>
</tr>
<tr>
<td>&gt;20%</td>
</tr>
<tr>
<td>CAS: 75-65-0</td>
</tr>
<tr>
<td>1-methoxy-2-acetoxypropane</td>
</tr>
<tr>
<td>EINECS: 200-889-7</td>
</tr>
<tr>
<td>&gt;20%</td>
</tr>
<tr>
<td>CAS: 107-39-1</td>
</tr>
<tr>
<td>2,4,4-Trimethyl-1-pentene</td>
</tr>
<tr>
<td>EINECS: 200-889-7</td>
</tr>
<tr>
<td>&gt;20%</td>
</tr>
<tr>
<td>CAS: 08-65-6</td>
</tr>
<tr>
<td>1-methoxy-2-acetoxypropane</td>
</tr>
<tr>
<td>Flam. liquid 2, H226</td>
</tr>
<tr>
<td>&gt;20%</td>
</tr>
<tr>
<td>CAS: 108-32-7</td>
</tr>
<tr>
<td>1,2 Propanediol carbonate</td>
</tr>
<tr>
<td>EINECS: 607-194-00-1</td>
</tr>
<tr>
<td>Xi R36</td>
</tr>
<tr>
<td>Serious eye irrit. 1, H319</td>
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<tr>
<td>6%</td>
</tr>
<tr>
<td>CAS: 110-43-0</td>
</tr>
<tr>
<td>2-heptanone</td>
</tr>
<tr>
<td>EINECS: 606-024-00-3</td>
</tr>
<tr>
<td>F R11; Xn R22; T R23; Xi R37</td>
</tr>
<tr>
<td>Flam. liquid 2, H226</td>
</tr>
<tr>
<td>Acute Toxic, Oral 4, H302</td>
</tr>
<tr>
<td>Acute Toxic, Inhal. 4, H332</td>
</tr>
<tr>
<td>Resp. Tract Irrit. 3, H335</td>
</tr>
<tr>
<td>5%</td>
</tr>
<tr>
<td>CAS-No.143860-04-2</td>
</tr>
<tr>
<td>3-Ethyl-2-methyl-2-(3-methylbutyl)oxazolidine</td>
</tr>
<tr>
<td>EC-No. 421-150-7</td>
</tr>
<tr>
<td>T R62; C R42; N R50/53</td>
</tr>
<tr>
<td>Reprod. Toxicity 1B, H362</td>
</tr>
<tr>
<td>Skin Irrit. 1B, H314</td>
</tr>
<tr>
<td>Acute Tox. Aquatic 1, H411: Acute Tox. Aquatic 1, H413</td>
</tr>
<tr>
<td>1 - 2%</td>
</tr>
</tbody>
</table>

(Cont. on page 4)
### 4 First aid measures

#### 4.1 Description of first aid measures

**General information:**
Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid to those affected. Consult a physician/doctor if necessary. Show this safety data sheet to the doctor in attendance.

**After inhalation:**
If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Call a physician.

**After skin contact:**
Remove contaminated clothing as needed. Wash skin promptly and thoroughly with mild soap and water. Flush with like warm water for 15 minutes. If sticky use waterless cleaner first. Seek medical attention if irritation develops.

**After eye contact:**
Thoroughly flush eyes with large amounts of clean water for at least 15 minutes, occasionally lifting and lowering upper eyelids. Get medical attention immediately.

**After swallowing:**
If product is swallowed, call physician or poison control center and obtain emergency medical attention. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice.

#### 4.2 Most important symptoms and effects, both acute and delayed

**Acute:** This material may cause irritation to the respiratory tract and skin and even burns. Product may cause an allergic skin reaction, and even dermatitis with long term exposure.

**Chronic:** Prolonged or repeated skin contact may cause allergic skin reaction or dermatitis. May cause pulmonary edema if aspirated into lungs.

**Target Organs:** **Acute:** Eye, Skin  **Chronic:** Skin, Respiratory tract

**Hazards:** Pre-existing skin, or eye problems may be aggravated by exposure to this product. Harmful may cause lung damage if swallowed.

#### 4.3 Indications of any immediate medical attention and special treatment

Treatment of overexposures should be directed at the control of symptoms and the clinical condition of patient. In case of ingestion, the stomach should be emptied by gastric lavage under qualified medical supervision.
5 Firefighting Measures

5.1 Extinguishing Media Suitable Extinguishing Agents:
Suitable extinguishing agents:
Use dry chemicals, CO₂, Water Spray or Alcohol resistant foam.

5.2 Unusual Fire and Explosion Hazards: Violent steam or erruption may occur when water spray or stream makes contact with hot liquids. Vapors/dust may form explosive mixture with air. Vapors can travel to a source of ignition and flash back. Empty containers retain product residue (liquid and vapor) and can be dangerous. DO NOT pressurize cut, weld, braze, xolder, drill, grind, or expose such cantainers to heat, flame, sparks, static electricity or other sources of ignition. Also do not reuse container.

5.3 Special Advice for Firefighters: During a fire, smoke may contain the original material in addition to combustion products of varying compositions which may be toxic or irritating. As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Do not use water jet (frothing possible). Water spray to cool containers or protect personnel. Use with caution. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

Protective Equipment:
Wear self-contained respiratory protective device. Structural firefighter's protective clothing will only provide limited protection.

5.4 Hazardous Combustion Products:
Nitrogen Oxide
Carbon Monoxide
Carbon Dioxide

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Use appropriate safety equipment. Use personal protective equipment.

6.2 Environmental precautions: All work practices must be aimed at eliminating environmental contamination. Do not allow to enter sewers/ surface or ground water. If product contaminates rivers and lakes or drains inform respective authorities.

6.3 Steps to be taken in case material is release or spilled:
Extremely flammable, eliminate all sources of ignition. All equipment used when handling this product must be grounded. Do not touch or walk through spilled material. Stop leak if it can be done safely without risk. Prevent entry into waterways, sewers, basements or confinded areas.

Methods and material for containment and cleaning up:
A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. Dike large spills and place materials in salvage containers. Water spray may reduce vapor, but may not prevent ignition in confined or closed spaces.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
7 Handling and Storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace. As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Use only non-sparking tools. Extinguish all ignition sources. Carefully vent any internal pressure before removing closure. Containers must be properly grounded before beginning transfer. Avoid breathing vapors/mists generated by this product. Remove contaminated clothing immediately. Prevent formation of aerosols. Handle empty containers with care: vapor/residue may be flammable. Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair. Check atmosphere for explosiveness and oxygen deficiencies. Wear recommended personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Store under an oxygen-free nitrogen atmosphere. Store closed pails with bung in up position. Store only in tight closed, properly vented containers away from heat sources, sparks, open flames and strong oxidizing agents. Store containers in a cool, well ventilated place. Keep container closed when not in use. Good general housekeeping procedures should be followed. Do not eat, drink or smoke while using material.

Information about storage in one common storage facility:
Store away from oxidizing agents
Store away from foodstuffs
Do not store together with acids
Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles

7.3 Specific end use(s):
No further relevant information available

8 Exposure Controls/Personal Protection

Additional information about design of technical facilities:
Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>List</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isoamyl methyl ketone</td>
<td>ACGIH</td>
<td>TWA</td>
<td>50ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>PEL</td>
<td>475mg/m³</td>
</tr>
<tr>
<td>Tert-Butyl acetate</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200ppm</td>
</tr>
<tr>
<td></td>
<td>NIOSH</td>
<td>IDHL</td>
<td>1500ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>TWA</td>
<td>950mg/m³</td>
</tr>
<tr>
<td>2-heptanone</td>
<td>ACGIH</td>
<td>TWA</td>
<td>50ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>PEL</td>
<td>100ppm</td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Personal protective 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.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan.
Respiratory Protection:

Use suitable respiratory protective device in case of insufficient ventilation. Use suitable respiratory protective device when aerosol or mist is formed. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member facilities storage or utilizing this material should be equipped with an eyewash facility and a safety shower.

EYE PROTECTION:
Wear safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE EQUIPMENT

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

HYGENIC PRACTICES:
Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands before eating.

9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid
Color: Clear
Odor: Camphor-like
Odor threshold: 71 ppb

pH: 6.8

Change in condition
Freezing point/Freezing range: -31°F (-35°C)
Boiling point/Boiling range: 302°F (150°C)

Flash point: 102°F (38.8°C)

Ignition temperature: Not determined
Decomposition temperature: Not determined
Self-igniting: 1092°F (588.8°C)

Danger of explosion: Handle as a combustible liquid

Explosion limits:
Lower: 1.7
Upper: 32.5

(Cont on page 8)
**Safety Data Sheet**

**Trade name:** 1057 DecoFinish E57 Part A

(Cont from page 7)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor pressure</td>
<td>2.4 mmHg @ 20°C</td>
</tr>
<tr>
<td>Density at 20°C</td>
<td>0.872 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>4.6 (air=1)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>0.3 butyl acetate</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Soluble - hydrolyzes rapidly</td>
</tr>
<tr>
<td>Viscosity</td>
<td>&lt;1 mPa.s</td>
</tr>
<tr>
<td>Kinematic</td>
<td>&lt;1 mm²/s</td>
</tr>
<tr>
<td>Solvent content</td>
<td>No data available</td>
</tr>
<tr>
<td>Organic solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2 Other information: No further relevant information available

**10 Stability and Reactivity**

- **10.1 Reactivity:** Will not occur
- **10.2 Chemical stability:** Stable under recommended storage conditions and thermally stable at typical use temperatures
- **Conditions to be avoided:**
  - Avoid impact, friction, heat, sparks, open flame other ignition sources and oxidizing conditions.
  - Avoid static discharge. Avoid moisture. Minimize exposure to air.
- **10.3 Thermal Decomposition Products:**
  - Decomposition of this product dependent upon temperature, air supply and the presence of other materials. Can produce carbon oxides
- **10.4 Incompatible materials/Materials to avoid:**
  - Prevent contact with strong oxidizing agents, zinc and zinc alloys. Avoid the following materials: Acids, alkalis, nitrates, moisture, hydrogen peroxide, chromic anhydride, nitrosyl perchlorate, potassium tert-butoxide, sodium hypobromite and chlorinated melamine
- **10.5 Hazardous decomposition products:**
  - Toxic fumes/gases are given off during burning or thermal decomposition. Also under hot, acidic conditions isobutylene and acetic acid may be formed.
  - During combustion carbon monoxide and/or carbon dioxide may be formed.
- **10.6 Hazardous Polymerization:** No information

**11 Toxicological Information**

**Product Summary:**
The below given information is based on the assessment of the product including impurities

**Acute toxicity:**

- **LD/LC50 values relevant for classification:**
  - LD50 Acute Dermal: 4,500 mg/kg
  - LD50 Acute Oral: 5,000 mg/kg

**Primary irritant effect:**

- **Inhalation:** May be irritating to the respiratory system. High vapor concentrations may cause shaking/tremors, fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over exposure
- **Skin Contact:** Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident on re-exposure to this material. Harmful if absorbed through skin. Repeated exposure may cause skin dryness or cracking which may result in skin irritation and dermatitis (rash)
- **Eye Contact:** Causes serious irritation to eyes. Symptoms may include stinging, tearing, redness and swelling.
Ingestion:
Harmful if swallowed. Ingestion may cause gastrointestinal tract irritation. High doses may cause shaking/tremors, fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over exposure. Over exposure may cause nausea, diarrhea and/or vomiting.

Sensitization:
Sensitization possible through skin contact. Sensitizing effect through inhalation is possible by prolonged exposure.

Additional toxicological information:
Irritant
Harmful

Reproductive Toxicity Information: No information concerning the effects of this product and its components on the human reproductive system.

12 Ecological Information

12.1 Toxicity
Aquatic toxicity:
The product contains materials that are harmful and may cause long term damage to the environment.
Rainbow trout LC50 129 mg/l
Daphina magna EC50 52 mg/l
Green alga EbC50 0.99 mg/l
Activated Sludge EC50 100 mg/l

12.2 Persistence and degradability: Moderately /partly biodegradable

12.3 Bioaccumulative potential: Bioconcentration factor (BCF) 5.61

12.4 Mobility in soil: No evidence is currently available on this products effects on plants or animals

Ecotoxic effects: Harmful to aquatic organisms

Additional ecological information:
General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralized. Danger to drinking water if even small quantities leak into the ground. Harmful to aquatic organisms

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

13 Disposal Considerations

13.1 Waste treatment methods
Recommendation
DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. Must not be disposed together with household garbage. Do not allow product to reach sewage system. Always dispose of any waste in accordance with all local, state and federal regulations.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

RCRA Waste Code: None listed.
EU Waste Code: None listed

(Cont on page 10)
### 14 Transport Information

**14.1 UN-Number**
- DOT, IMDG, IATA, ADR: UN 1123

**14.2 UN proper shipping name**
- DOT, IMDG, IATA: Butyl Acetates

**14.3 Transport hazard class(es)**
- **DOT**
  - Class: 3 Flammable
  - Label: 3
- **IMDG**
  - Class: 3 Flammable
  - Label: 3
- **IATA**
  - Class: 3 Flammable
  - Label: 3

**14.4 Packing group**
- DOT, ADR, IMDG, IATA: II

**14.5 Environmental hazards:**
- Product contains environmentally hazardous substances:
  - Tert-Butyl Acetate
  - Yes
- Symbol (fish and tree)

**14.6 Special precautions for user**
- Warning: Flammable, Combustible and Corrosive
- Danger code (Kemler): 30
- EMS Number: F-E, S-D

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Transport/Additional information:
- **ADR**
  - Tunnel restriction code: D/E
  - UN "Model Regulation": UN 1123 Butyl Acetates 3 PG II
## 15 Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### United States (USA)

**SARA:**
This product has been reviewed according to the EPA ‘Hazard Categories’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
- Immediate Acute Health Hazard, Fire Hazard

**Proposition 65 (California):**
- **Chemicals known to cause cancer or reproductive harm:**
  - **Chemicals known to cause cancer:** No components exist in this product
  - **Chemicals known to cause reproductive toxicity for females:** No components exist in this product
  - **Chemicals known to cause reproductive toxicity for males:** No components exist in this product
  - **Chemicals known to cause developmental toxicity:** No components exist in this product

#### Section 313 (Specific toxic chemical listings):
- Tert-Butyl acetate

#### Section 355 (extremely hazardous substances):
- No components exist in this product

#### TSCA (Toxic Substances Control Act):
- No components exist in this product

#### California Proposition 65:
- **Chemicals known to cause cancer or reproductive harm:**
  - **Chemicals known to cause cancer:** No components exist in this product
  - **Chemicals known to cause reproductive toxicity for females:** No components exist in this product
  - **Chemicals known to cause reproductive toxicity for males:** No components exist in this product
  - **Chemicals known to cause developmental toxicity:** No components exist in this product

#### Carcinogenic Categories

- **EPA (Environmental Protection Agency):** None of the ingredients are listed.
- **IARC (International Agency for Research on Cancer):** None of the ingredients are listed.
- **TLV (Threshold Limit Value established by ACGIH):** None of the ingredients are listed.

#### NIOSH-Ca (National Institute for Occupational Safety and Health):
- None of the ingredients are listed.

#### OSHA-Ca (Occupational Safety & Health Administration):
- None of the ingredients are listed.

#### New Jerseys Right-To-Know

- This product contains the following chemicals regulated by New Jersey’s Worker and Community Right to Know Act:
  - 540-88-5 Tert-Butyl acetate
  - 75-65-0 Tert-Butyl acetate

#### Pennsylvania Right-To-Know

- This product contains the following chemicals regulated by Pennsylvania’s Right to Know Act:
  - 540-88-5 Tert-Butyl acetate
  - 75-65-0 Tert-Butyl acetate
  - 107-39-1 2,4,4-Trimethyl-1-pentene
  - 110-12-3 Isoamyl methyl ketone

#### Massachusetts Right-To-Know

- This product contains the following chemicals regulated by Pennsylvania's Right to Know Act:
  - 540-88-5 Tert-Butyl acetate
  - 75-65-0 Tert-Butyl acetate
  - 107-39-1 2,4,4-Trimethyl-1-pentene

#### Canada

- **Canadian Domestic Substances List (DSL):** All ingredients are listed.
- **Canadian Ingredient Disclosure list (limit 0.1%):** None of the ingredients are listed
- **Canadian Ingredient Disclosure list (limit 1%):** None of the ingredients are listed

### 15.2 Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.
16 Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H225  Highly flammable liquid and vapor
H226  Flammable liquid and vapor
H227  Combustible liquid
H233  Keep container tightly closed
H302  Harmful if swallowed
H314  Causes severe skin burns and eye damage
H319  Causes serious eye damage
H332  Harmful if inhaled
H335  May cause respiratory irritation
H336  May cause drowsiness or dizziness
H400  Very toxic to aquatic life
H402  Harmful to aquatic life
P210  Keep away from heat/sparks/open flame/hot surfaces. No smoking
P233  Keep container tightly closed
P240  Ground/bond container and receiving equipment
P241  Use explosion-proof electrical/ventilating/lighting/equipment
P242  Use only non-sparking tools
P243  Take precautionary measures against static discharge
P261  Avoid breathing dust/fume/gas/mist/vapors/spray
P264  Wash thoroughly after handling
P270  Do not eat, drink or smoke when using this product
P271  Use only outdoors or in a well-ventilated area
P280  Wear protective gloves/protective clothing/eye protection/face protection
P403+P233  Store in a well ventilated place. Keep container tightly closed
P403+P235  Store in a well ventilated place. Keep cool.
P405  Store locked up
P501  Dispose of contents/container in accordance with local/regional/national/international regulations

Abbreviations and Acronyms
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk of his use of the material for either Component A and/or B or the combination of both components.

1 Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Trade name: 1057 DecoFinish E57  Part B

1.2 Application of the substance / the preparation: Epoxy curing agent

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:
Thermal-Chem Corporation
2550 Edgington St
Franklin Park, IL  60131 USA
Tel (800) 635-3773

Emergency Contact: CHEMTREC® (800) 424-9300

2 Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS08

GHS07

Resp. Sens. 1; H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
Acute Tox. 4;  H332: Harmful if inhaled.
Skin Sens. 1;  H317: May cause an allergic skin reaction.
STOT SE 3;  H335: May cause respiratory irritation.

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

Xn; Harmful
R20/22: Harmful by inhalation and if swallowed.
Xi; Irritant
R37: Irritating to respiratory system.
Xi; Sensitizing
R43: May cause sensitization by skin contact.

Information concerning particular hazards for human and environment:
The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
· **Classification system:**
  The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
  The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**
  · **Labeling according to Regulation (EC) No 1272/2008**
    The product is classified and labeled according to the CLP regulation.
  · **Hazard pictograms**
    ![GHS08](image1) ![GHS07](image2)

· **Signal word** Danger

· **Hazard-determining components of labeling:**
  Hexamethylene diisocyanate oligomers, Isocyanurate hexamethylene-di-isocyanate

· **Hazard statements**
  H332 Harmful if inhaled.
  H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  H317 May cause an allergic skin reaction.
  H335 May cause respiratory irritation.

· **Precautionary statements**
  P260 Do not breathe dust/fume/gas/mist/vapors/spray.
  P284 In case of inadequate ventilation wear respiratory protection.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P304+P340 **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing
  P302+P352 If on skin: Wash with plenty of water.
  P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.

· **Hazard description:**
  CAUTION! HARMFUL IF INHALED. MAY CAUSE SKIN, EYE AND RESPIRATORY TRACT IRRITATION.
  POSSIBLE SENSITIZER. REACTS WITH COMMON MATERIALS INCLUDING WATER, ALCOHOLS, BASES AND AMINES RELEASING LARGE AMOUNTS OF CARBON DIOXIDE.

· **Classification system:**
  · **NFPA ratings (scale 0 - 4)**
    ![1](image3) ![2](image4) ![3](image5) ![4](image6)
    Health = 2
    Fire = 1
    Reactivity = 1

(Cont. on page 3)
Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 28182-81-2</th>
<th>Hexamethylene diisocyanate oligomers, Isocyanurate</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC number: 931-274-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 822-06-0</td>
<td>hexamethylene-di-isocyanate</td>
<td>&lt; 0.2%</td>
</tr>
<tr>
<td>EINECS: 212-485-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4 First Aid Measures

4.1 Description of first aid measures

General information:
Immediately remove any clothing soiled by the product.
Use appropriate protective equipment when treating a contaminated person.
Place contaminated clothing in a sealed bag for disposal.
In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation:
Move the person away from the contaminated area.
Fresh air and rest.
Seek immediate medical advice.
Show this sheet to the doctor.

After skin contact:
Wash with soap and water.
Wash immediately and thoroughly for a prolonged period (at least 15 minutes).
In case of inflammation (redness, irritation, ...) obtain medical attention.

After eye contact:
Immediately rinse with plenty of running water for a prolonged period, (at least 15 minutes) while keeping the eyes wide open.
If irritation persists, consult a doctor.
Show this sheet to the doctor.

After swallowing:
NEVER attempt to induce vomiting. Rinse mouth out with water.
Do not give anything to drink.
If necessary seek medical advice.
Show this sheet to the doctor.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available

4.3 Indication of any immediate medical attention and special treatment needed
All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
Treat symptomatically. No specific antidote available
5 Firefighting Measures

· 5.1 Extinguishing media

Suitable extinguishing agents:
Foam
Powders
Carbon dioxide
Dry chemical

For safety reasons unsuitable extinguishing agents: Water

· 5.2 Special hazards arising from the substance or mixture

Combustible.
During combustion toxic vapors are released.
Under fire conditions, corrosive fumes are emitted: oxides of nitrogen oxides of carbon.
Reacts with water releasing large amounts of carbon dioxide which may cause pressure build-up in confined spaces.

· 5.3 Advice for firefighters

Protective equipment:
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Additional information
Stay upwind.
Evacuate the personnel away from the fumes.
In case of fire close by:
Cool down the containers/equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product.
Do not breathe fumes.
Do NOT attempt to fight the fire without suitable protective equipment.
If there is a fire close by and if packaging has not been damaged:
Use suitable extinguishers.

6 Accidental Release Measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe gas.
Avoid any direct contact with the product.
Do NOT approach from DOWNWIND.
Do NOT attempt to take action WITHOUT suitable protective equipment.
Self-contained breathing apparatus.
Wear fully protective suit.
Keep people at a distance and stay upwind.
Mark out the contaminated area with signs and prevent access to unauthorized personnel.

· 6.2 Environmental precautions:

Contain the spilled material by binding.
Do not allow to enter sewers/surface or ground water.
7 Handling and Storage

7.1 Precautions for safe handling
- Ensure good ventilation/aspiration at the workplace.
- Avoid contact with water or humidity.
- Avoid any direct contact with the product.
- Any measure to eliminate exposure should be considered.
- Very high level of containment required, except for short term exposures e.g. taking samples (industrial use condition).
- Comply with instructions for use (refer to technical sheet).

7.2 Conditions for safe storage, including any incompatibilities
- Suitable material for receptacle and pipe: epoxy-coated steel.
- Unsuitable material for receptacle: Polystyrene.
- Store only in unopened original receptacles.
- Metallic drums.
- Storage tank with a dry nitrogen blanket.
- Packaging materials recommended: Aluminium.
- Steel.
- Unsuitable material for receptacle: Copper.
- Unsuitable material for receptacle: Tin

7.3 Specific end use(s) No further relevant information available.
8 Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
The recommended limits SHOULD NOT be exceeded. Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

<table>
<thead>
<tr>
<th>Substance</th>
<th>REL Short-term value: C 0.14* mg/m³, C 0.02* ppm</th>
<th>Long-term value: 0.035 mg/m³, 0.005 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>822-06-0 hexamethylene-di-isocyanate</td>
<td>* 10-min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TLV 0.034 mg/m³, 0.005 ppm</td>
<td></td>
</tr>
</tbody>
</table>

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

C 1 mg/m³

TLV (Threshold Limit Value established by ACGIH)

822-06-0 hexamethylene-di-isocyanate

NIOSH-Ca (National Institute for Occupational Safety and Health)

822-06-0 hexamethylene-di-isocyanate

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Ensure good ventilation of the work station. Safety shower.
Eye wash. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Shower or take a bath at the end of work.

Breathing equipment:
When using a spray-gun, wear: Self-contained breathing apparatus.
In the event of insufficient ventilation: Self-contained breathing apparatus. When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Protection of hands:

Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
Suitable materials also with prolonged, direct contact (protective index 6, corresponding > 480 minutes of permeation time):
- Nitrile rubber, NBR
- Fluorocarbon rubber (Viton)
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection:

Safety glasses

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area.

Body protection: Protective work clothing

9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:
- Form: Liquid
- Color: Colorless to pale yellow.
- Odor: Odorless

pH-value: Not applicable (reacts with water).

Change in condition
- Melting point/Melting range: > 220 °C (>428 °F) (at 1.33hPa)
- Boiling point/Boiling range: > 203 °C (397 °F) at 1 mmHg

Flash point: 137 °C (279 °F) (EN 22719) Flammability Class: WILL BURN

Ignition temperature: 460 °C (860 °F) (Spontaneous ignition temp)

Danger of explosion: Not explosive.

Explosion limits:

Oxidizing properties Not oxidizing.

Density at 25 °C (77 °F): 1.16 g/cm³ (9.68 lbs/gal)

Solubility in / Miscibility with
- Water: Reacts
- Ketones: Soluble
- aromatic hydrocarbons: Soluble
- esters: Soluble
10 Stability and Reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
  - Thermal decomposition / conditions to be avoided: Stable at ambient temperature.
- **10.3 Possibility of hazardous reactions**
  Reacts with:
  - alcohols.
  - amines.
  - bases.
  - protic solvents.
  - water and aqueous solutions.
  with a great release of CO₂, and hence a risk of a pressure build-up in confined areas, and forms an insoluble solid precipitate.
  Reacts with strong acids
  Reacts with strong oxidizing agents
- **10.4 Conditions to avoid**
  - extreme heat
  - open flame moisture
  - ignition sources
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
  - On thermal decomposition (pyrolysis) releases:
    - Toxic gases.
    - Carbon dioxide
    - Nitrogen oxides
    - Oxides of carbon

11 Toxicological Information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values:**
  Harmful by inhalation.
  To comply with regulatory guidelines, the substance was tested in a form (i.e. specific particle size distribution) that is different from the form in which the substance is placed on the market and in which it can reasonably be expected to be used. The acute inhalation toxicity of the substance is due to its local action on the distal part of the respiratory tract. As, in the conditions in which the product can reasonably be expected to be used, only a small fraction of the aerosols formed may reach this part of the respiratory tract, a correction has been made to take this difference into consideration. Based on our Expert judgment, the classification Acute inhalation toxicity category 4 is justified.
  Not harmful by skin contact.
  Not harmful if swallowed.

(Cont. on page 10)
### 28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

<table>
<thead>
<tr>
<th>Route</th>
<th>LD0</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>&gt; 2500 mg/kg (rat) (OECD 423 (female))</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt; 2000 mg/kg (rabbit) (OECD 402)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 2000 mg/kg (rat) (OECD 402)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4h</td>
<td>0.390 mg/l (rat) (OECD 403 (female))</td>
</tr>
</tbody>
</table>

### 822-06-0 hexamethylene-di-isocyanate

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>746 mg/kg (rat) (OECD 401)</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt; 7000 mg/kg (rat) (OECD 402)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4h</td>
<td>0.124 mg/l (rat) (OECD 403)</td>
</tr>
</tbody>
</table>

**Primary irritant effect:**

**on the skin:**
- Not classified as irritating to skin. (OECD 404)
- (rabbit)

**on the eye:**
- Not classified as irritating to eyes. (OECD 405)
- (rabbit)

**Inhalation:**
- May cause respiratory irritation.

### 28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

**Inhalative NOAEC/6h:**
- 3 mg/m³ (rat) ((OECD TG 403) (TRGS))

**Additional toxicological information:**

**Carcinogenic categories**

**OSHA-Ca (Occupational Safety & Health Administration)**
- Not listed.

**Sensitization**
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause sensitisation by skin contact.

**Carcinogenicity:**
- Not considered to be carcinogen.

### 822-06-0 hexamethylene-di-isocyanate

**Inhalative NOAEC Carc**
- 0.164 ppm (rat) (OECD 453)

**Mutagenicity:**
- Is not considered genotoxic.

**Reproductive toxicity:**
- Is not considered hazardous to the reproduction.

### 822-06-0 hexamethylene-di-isocyanate

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalative NOAEC Dvlp/Tera Tox</td>
<td>0.3 ppm (rat) (OECD 414)</td>
</tr>
<tr>
<td>NOAEC Maternal Tox</td>
<td>0.005 ppm (rat) (OECD 414)</td>
</tr>
<tr>
<td>NOEC Fert</td>
<td>0.3 ppm (rat) (OECD 422)</td>
</tr>
</tbody>
</table>
12 Ecological Information

12.1 Toxicity

Aquatic toxicity: This product does not have any adverse effects on the aquatic organisms tested

<table>
<thead>
<tr>
<th>28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC10/72h (static) 370 mg/l (Desmodesmus subspicatus) (EU C.3)</td>
</tr>
<tr>
<td>EL50/48h (static) 127 mg/l (Daphnia magna) (EU C.2)</td>
</tr>
<tr>
<td>ErC50/0-72h (static) &gt; 1000 mg/l (Desmodesmus subspicatus) (EU C.3)</td>
</tr>
<tr>
<td>LL0/96h ≥ 82.8 mg/l (Brachydanio rerio) (EU C.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>822-06-0 hexamethylene-di-isocyanate</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC0/48h (static) ≥ 89.1 mg/l (Daphnia magna) (EU C.2)</td>
</tr>
<tr>
<td>ErC50/0-72h (static) &gt; 77.4 mg/l (Desmodesmus subspicatus) (EU C.3)</td>
</tr>
<tr>
<td>LC0/96h (static) ≥ 82.8 mg/l (Brachydanio rerio) (EU C.1)</td>
</tr>
<tr>
<td>NOEC/72h (static) 11.7 mg/l (Desmodesmus subspicatus) (EU C.3)</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

The product is not readily biodegradable.

<table>
<thead>
<tr>
<th>28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD28 1 % (bacteria) ((EU C.4-E) (Unpublished report))</td>
</tr>
<tr>
<td>DT50 3 h (Photolysis) ((25 °C) (AOPWIN v1.92) (Internal evaluation))</td>
</tr>
<tr>
<td>7.7 h (Hydrolysis) ((23 °C) (ASTM D4666) (Internal evaluation))</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>822-06-0 hexamethylene-di-isocyanate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD28 42 % (bacteria) (EU C.4-D)</td>
</tr>
<tr>
<td>DT50 25 °C, 48.44 h (Photolysis) (AOPWIN v1.92)</td>
</tr>
<tr>
<td>23 °C, 0.23 h (Hydrolysis) (ASTM D4666)</td>
</tr>
</tbody>
</table>

12.3 Behavior in environmental systems:

Components: No information available.

Bioaccumulative potential
Not potentially bioaccumulable.
Log Pow, see section 9.

<table>
<thead>
<tr>
<th>28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF 3.2 (fish) (BCFWIN v. 2.17)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>822-06-0 hexamethylene-di-isocyanate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF 3.2 (fish) (BCFWIN v. 2.17)</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil No further relevant information available.

<table>
<thead>
<tr>
<th>28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Koc 7.8 (.) (PCKOC v1.66)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>822-06-0 hexamethylene-di-isocyanate</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50/3h (static) 842 mg/l (bacteria) (OECD 209)</td>
</tr>
</tbody>
</table>
Revision: 07/21/2015

Printing date: 08/01/2015

Trade name: 1057 DecoFinish E57 Part B

- Other information: Formation of insoluble polyurea and/or amine derivative.

12.5 Ecotoxicological effects:

Behavior in sewage processing plants:

<table>
<thead>
<tr>
<th>Compound</th>
<th>EC50/3h (static)</th>
<th>Test System</th>
<th>OECD No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>28182-81-2 Hexamethylene disocyanate oligomers, Isocyanurate</td>
<td>3828 mg/l</td>
<td>activated sludge</td>
<td>209</td>
</tr>
<tr>
<td>822-06-0 hexamethylene-di-isocyanate</td>
<td>842 mg/l</td>
<td>bacteria</td>
<td>209</td>
</tr>
</tbody>
</table>

12.6 Results of PBT and vPvB assessment

PBT: No.

vPvB: No.

- Other adverse effects: No further relevant information available

13 Disposal Considerations

- 13.1 Waste treatment methods

Recommendation:

Discharging waste into rivers and drains is forbidden.

Incinerate at a licensed installation.

Disposal must be made according to federal, state and local regulations.

Waste disposal key: EPA Hazardous Waste - NO

Uncleaned packaging:

Contaminated packaging materials must be disposed of in the same manner as the product.

Recommendation:

Allow it to drain thoroughly.

Thoroughly emptied and clean packagings may be recycled.

Disposal must be made according to official regulations.

14 Transport Information

14.1 UN-Number

DOT, ADR, ADN, IMDG, IATA: NOT regulated.

14.2 UN proper shipping name

DOT, IMDG, IATA: NOT regulated.

14.3 Transport hazard class(es)

DOT, ADN Class:

ADR, IMDG, IATA Class:

14.4 Packing group

DOT, ADR, IMDG, IATA: NOT regulated.

14.5 Environmental hazards:

Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information:

The above regulatory prescriptions are those valid on the date of publication of this sheet.

However, given the possible evolution of transport regulations for hazardous materials and in the event of the SDS in your possession dating back more than 12 months, it is advisable to check their validity with your sales office.
## 15 Regulatory information

### 15.1 National legislation

- Safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.2 Carcinogenic categories

### 15.3 EPA (Environmental Protection Agency)

- Not listed.

### 15.4 IARC (International Agency for Research on Cancer)

- Not listed.

### 15.5 NTP (National Toxicology Program)

- Not listed.

### 15.6 Other regulations, limitations and prohibitive regulations

- State of California, Proposition 65:

<table>
<thead>
<tr>
<th>Chemicals known to cause cancer:</th>
<th>Not listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals known to cause reproductive toxicity for females:</td>
<td>Not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for males:</td>
<td>Not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause developmental toxicity:</td>
<td>Not listed.</td>
</tr>
</tbody>
</table>

(Cont. on page 14)
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P284 In case of inadequate ventilation wear respiratory protection.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P302+P352 If on skin: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Trade name: 1057 DecoFinish E57 Part B

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