SECTION 1: PRODUCT & COMPANY IDENTIFICATION

1.1 Product Identifiers

Product Name: NANOMYTE® MEND 2000 (Part A)
CAS Number: A CAS number has not been assigned to this material.

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

This product is intended for use as a self-healing coating for plastics, metals, and other surfaces.

1.3 Details of the Supplier of the Safety Data Sheet

Company: NEI Corporation
Address: 400 Apgar Drive, Unit E | Somerset, NJ 08873 – USA
Phone: +1 (732) 868-3141 Fax: +1 (732) 868-3143
Email: productinfo@neicorporation.com
Website: www.neicorporation.com

1.4 Emergency Telephone Numbers

Manufacturer: +1 (732) 868-3142 (9am to 6pm EST / UTC -0500)
U.S. Poison Control Center: +1 (800) 222-1222
ChemTel (North America): +1 (800) 255-3924 (during transportation only)
ChemTel (International): +1 (813) 248-0585 (during transportation only – collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
- Flammable liquids (Category 2), H225
- Eye irritation (Category 2B)
- Reproductive toxicity (Category 2), H361
- Skin irritation (Category 2), H315
- Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
- Specific target organ toxicity - repeated exposure (Category 2), H373
- Aspiration hazard (Category 1), H304
- Acute aquatic toxicity (Category 2), H401

2.2 GHS Label elements, including precautionary statements

Pictogram(s):

Signal Word: Danger

Hazard Statement(s):

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H301 + H311 + H331</td>
<td>Toxic if swallowed, in contact with skin, or if inhaled</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>H370</td>
<td>Causes damage to organs</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
</tbody>
</table>
Precautionary Statement(s):

P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P210 Keep away from heat / sparks / open flames / hot surfaces — no smoking
P260 Do not breathe dust / fume / gas / mist / vapors / spray
P264 Wash hands thoroughly after handling
P273 Avoid release to the environment
P280 Wear protective gloves, protective clothing, eye protection, face protection
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P303 + P361 + P353 IF ON SKIN (or hair): Remove / take off immediately all contaminated clothing. Rinse skin with water / shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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 rinsing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P314 Get medical advice/attention if you feel unwell
P308 + P313 If exposed or concerned: Get medical advice/attention.
P332+P313 IF SKIN irritation occurs: Get medical advice/attention
P362 Take off contaminated clothing and wash before reuse
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up
P412 Store at temperatures not exceeding 5 °C / 41 °F. Keep cool.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Formula</th>
<th>CAS #</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>C₇H₈</td>
<td>108-88-3</td>
<td>40 wt%</td>
</tr>
<tr>
<td>Polyester Polyol</td>
<td>C₂₈H₄₄O₁₂</td>
<td>67815-82-1</td>
<td>36 wt%</td>
</tr>
<tr>
<td>2-Methoxy-1-Methylethyl Acetate (PGMEA)</td>
<td>C₆H₁₂O₃</td>
<td>108-65-6</td>
<td>10 wt%</td>
</tr>
<tr>
<td>Trade Secret Ingredients</td>
<td>n/a</td>
<td>n/a</td>
<td>14 wt%</td>
</tr>
</tbody>
</table>
immediate medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed
The most important known symptoms and effects are described in section 2 and/or in section 11.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed
No Data Available

SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2 Special Hazards Arising from the Substance or Mixture
Hazardous decomposition products that may be formed under fire conditions: Carbon oxides, oxides of nitrogen, dense black smoke, other undetermined compounds

5.3 Advice for Firefighters
Wear full protective clothing and self-contained breathing apparatus approved for firefighting. Do not breathe smoke, gases, or vapors generated.

5.4 Other Information
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat, sparks, open flame, or hot surfaces. No smoking.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures
Use personal protective equipment. Ensure adequate ventilation. Avoid breathing vapors, mist, or gas. Keep unprotected persons away. Eliminate all sources of ignition or overheating. Beware of vapors accumulating to form explosive concentrations. Ventilate area and wash spill site after material pickup is complete.

6.2 Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and Materials for Containment and Cleaning Up
Dike area to prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as a chemical waste in accordance with current local, state and federal regulations.

6.4 Reference to Other Sections
For safe handling, see Section 7; for personal protection, see Section 8; for disposal, see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling
Appropriate personal protective equipment should be used at all times. Provide good ventilation or extraction. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapor or mist. Keep away from heat, sparks, flames and other sources of ignition.

7.2 Conditions for Safe Storage (including any incompatibilities)
Avoid contamination with incompatible materials. Keep away from heat, sparks, flames and other sources of ignition. Residual vapors might explode on ignition. Do not apply heat, cut, drill, and grind or weld on or near this container.

7.3 Specific End Uses
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Value</th>
<th>Control Parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGMEA</td>
<td>108-65-6</td>
<td>TWA</td>
<td>50 ppm</td>
<td>USA. Workplace Environmental Exposure Levels (WEEL)</td>
</tr>
</tbody>
</table>
### Section 8: Physical and Chemical Properties

#### 8.2 Exposure Controls

**Appropriate Engineering Controls**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food and beverages. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and end of workday. Provide appropriate ventilation.

**Personal Protective Equipment**

**Respiratory Protection:**

Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with appropriate respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye / Face Protection:**

Face shield and/or safety glasses should be worn. Use eye protection equipment that is tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Hand Protection:**

Handle with chemical resistant gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands after use.

**Skin and Body Protection:**

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Control of Environmental Exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Section 9: Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

- **Form:** Liquid
- **Color:** Colorless
- **Odor:** Solvent-like
- **pH:** No Data Available
- **Melting Point / Range:** No Data Available
- **Initial Boiling Point / Range:** No Data Available
- **Flashpoint:** No Data Available
- **Evaporation Rate:** No Data Available
- **Flammability (solid, gas):** No Data Available
- **Upper Explosion Limit:** No Data Available

---

**Remarks:** Visual impairment; Female reproductive; Pregnancy loss; 2015 Adoption Substances for which there is a Biological Exposure Index or Indices (see BEI® section); Not classifiable as a human carcinogen.
Lower Explosion Limit: No Data Available
Vapor Pressure: No Data Available
Vapor Density: No Data Available
Relative Density: No Data Available
Water Solubility: No Data Available
Auto-ignition Temperature: No Data Available
Decomposition Temperature: No Data Available
Viscosity: No Data Available
Explosive Properties: No Data Available

9.2 Other Information
Solids Content: 35 – 40%

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
No Data Available

10.2 Chemical Stability
Stable under recommended storage conditions (see Section 7.2)

10.3 Possibility of Hazardous Reactions
Vapors may form explosive mixture with air

10.4 Conditions to Avoid
Heat, flames and sparks

10.5 Incompatible Materials
Strong oxidizing agents, reducing agents, peroxides, strong acids & bases

10.6 Hazardous Decomposition Products
In case of fire, see Section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects (of components with known values)

<table>
<thead>
<tr>
<th>Acute Toxicity</th>
<th>Toluene</th>
<th>Polyester Polyol</th>
<th>PGMEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50:</td>
<td>5,580 mg/kg (Rat)</td>
<td>2,500 mg/kg (Rat)</td>
<td>8,532 mg/kg (Rat)</td>
</tr>
<tr>
<td>Inhalation LC50:</td>
<td>12,500 - 28,800 mg/m³ (Rat - 4h)</td>
<td>No Data Available</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Dermal LD50:</td>
<td>12,196 mg/kg (Rabbit)</td>
<td>No Data Available</td>
<td>2,000 mg/kg (Rabbit)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation:
- Skin – Rabbit (24h)
  Result: Skin irritation
- Skin – Rabbit (8h)
  Result: Mild irritation
- Skin – Rabbit
  Result: No skin irritation

Serious eye damage/eye irritation:
- Eyes – Rabbit
  Result: No eye irritation
- Eyes – Rabbit
  Result: No eye irritation

Respiratory or skin sensitization:
No Data Available

Germ cell mutagenicity:
- Rat - Liver
  DNA damage
  No Data Available

Carcinogenicity:
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Toluene)
ACGIH: No component of this product (present at levels greater than or equal to 0.1%) is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product (present at levels greater than or equal to 0.1%) is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product (present at levels greater than or equal to 0.1%) is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity (Toluene only)
Damage to fetus possible - Suspected human reproductive toxicant
Reproductive toxicity - Rat - Inhalation
Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).
Experiments have shown reproductive toxicity effects in male and female laboratory animals.
Developmental Toxicity - Rat - Oral
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Teratogenicity
No Data Available

Specific target organ toxicity - single exposure (Globally Harmonized System)
Toluene: Eyes, Respiratory Tract, Central Nervous System
PGMEA: Eyes, Skin, Respiratory Tract, Central Nervous System

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
Toluene: Skin, Central Nervous System
PGMEA: Defats the skin

Aspiration hazard
Toluene: May be fatal if swallowed and enters airways.

Additional Information
Toluene (RTECS: XS5250000)
Lung irritation, chest pain, pulmonary edema; Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce, and scrotum in animals; Central nervous system
Stomach - Irregularities - Based on Human Evidence
PGMEA (RTECS: AI8925000)
Eye, nose, throat and skin irritation; cough, sore throat; headache, nausea, dizziness, drowsiness; INGES. ACUTE: Abdominal pain, diarrhea; unconsciousness.

To the best of our knowledge, the chemical, physical, & toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity (of components with known values)

Toluene
Toxicity to fish (LC50): Oncorhynchus mykiss (rainbow trout) - 7.63 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates (EC50):
Daphnia magna (Water flea) - 8.00 mg/l - 24 h
Immobilization EC50 - Daphnia magna (Water flea) - 6 mg/l - 48 h
Chlorella vulgaris (Fresh water algae) - 245.00 mg/l - 24 h
Pseudokirchneriella subcapitata (green algae) - 10.00 mg/l - 24 h

Polyester Polyol
Toxicity to fish (LC50): 161 mg/l (fathead minnow) - 96 hrs
Toxicity to daphnia and other aquatic invertebrates (EC50):
408 mg/l (water flea) - 48 hrs

PGMEA
Toxicity to fish (LC50): Salmo gairdneri - 100 - 180 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates (EC50):
Static Test - Daphnia magna (Water flea) - > 500 mg/l - 48 h
Toxicity to algae (EC50):
No Data Available

12.2 Persistence and Degradability
Toluene: Readily biodegradable
Polyester Polyol: Aerobic - Exposure time 8 d | Result: 100% - Readily biodegradable
PGMEA: Biotic / Aerobic - Exposure time 28 d | Result: 83% - Readily biodegradable

12.3 Bioaccumulative Potential
Toluene: Leuciscus idus (Golden orfe) - 3 d - 0.05 mg/l | Bioconcentration factor (BCF): 90

12.4 Mobility in Soil
No Data Available

12.5 Results of PBT and vPvB Assessment
PBT/vPvB assessment not available as chemical safety assessment not conducted

12.6 Other Adverse Effects
Toluene: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods
Product: Waste disposal should be in accordance with existing federal, state and local environmental control laws. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated Packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 Department of Transportation (DOT - US)
UN number: 1866  Class: 3  Packing Group: II
Proper Shipping Name: Resin solution, flammable

14.2 International Maritime Dangerous Goods (IMDG)
UN number: 1866  Class: 3  Packing Group: II
Proper Shipping Name: Resin solution, flammable

14.3 International Air Transport Association (IATA)
UN number: 1866  Class: 3  Packing Group: II
Proper Shipping Name: Resin solution, flammable

14.4 Other
HS Code (first 6 digits) / HTS-US #: 3208.90.0000

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture
SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

Component Name | CAS #
--- | ---
Toluene | 108-88-3

SARA 311/312 Hazards

Component Name | CAS # | Hazards
--- | --- | ---
Toluene | 108-88-3 | Fire Hazard, Acute Health Hazard, Chronic Health Hazard
Polyester polyol | 67815-82-1 | Fire Hazard, Acute Health Hazard, Chronic Health Hazard
PGMEA | 108-65-6 | Fire Hazard, Chronic Health Hazard

SARA 311/312 Hazards
The following product components are cited on the lists below:
### Component | CAS # | List Citations
--- | --- | ---
Toluene | 108-88-3 | MA, NJ, PA Right to Know
Polyester polyol | 67815-82-1 | MA, NJ, PA Right to Know
PGMEA | 108-65-6 | NJ, PA Right to Know

**CALIFORNIA PROPOSITION 65**
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### Component | CAS #
--- | ---
Toluene | 108-88-3

**15.2 Chemical Safety Assessment**
A chemical safety assessment was not carried out for this product.

### SECTION 16: OTHER INFORMATION

**REACH Number**
A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**HMIS Classification**

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard</td>
<td>2</td>
</tr>
<tr>
<td>Flammability Hazard</td>
<td>3</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

**NFPA Rating**

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard</td>
<td>2</td>
</tr>
<tr>
<td>Flammability Hazard</td>
<td>3</td>
</tr>
<tr>
<td>Reactivity Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

**Further Information**
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