

## NANOMYTE® MEND 1000

NANOMYTE® MEND 1000 is a thermally-induced, self-healing coating. The 2-part coating involves a unique phase-separated morphology that facilitates the delivery of the self-healing agent to the damage site (such as a scratch or crack) thereby restoring the coating appearance & function. The coating's self-healing function is activated upon the application of a small amount of heat (60 – 80 °C) for several seconds with a simple device, such as a household hair dryer, or even hot water.

### Physical Characteristics

---

<b>Composition:</b>	2k polyurethane with proprietary additives
<b>Color:</b>	Clear, colorless (as supplied; pigmented versions available upon request)
<b>Gloss (20°/60°):</b>	88 GU/ 92 GU
<b>Pot Life:</b>	5 hours at 25°C (minimum, as supplied)
<b>Viscosity:</b>	40-80 cP (mixed, as supplied; increased viscosity versions available upon request)
<b>Curing Temperature:</b>	60°C (minimum), 100°C (recommended)
<b>Self-healing Temperature:</b>	60 – 80 °C
<b>Solvent:</b>	Toluene
<b>DTT (dry-to-touch) Time:</b>	15-30 minutes at 100°C (as-supplied, depending on application and curing conditions)
<b>Accelerated DTT Time:</b>	1-2 minutes at 100°C (after addition of 1% MEND catalyst)
<b>Catalyst:</b>	Tin
<b>Mixing Ratio (A:B):</b>	1:1 (by weight)
<b>Solids Content:</b>	33 – 36%

### Application Instructions

- 
1. Combine 1 part (by weight) of Part A with 1 part of Part B (both components are included with purchase)
  2. Mix thoroughly until homogeneous and apply promptly (preferably within 2 hours)
  3. Once applied, transfer coated part to preheated oven within 5 minutes
  4. Recommended curing schedule: 80°C for 15 minutes, followed by 120°C for 1 hour

### Customization

- 
- Viscosity may be adjusted by diluting with MEND Reducer; contact NEI if a higher viscosity is desired
  - Tints and pigments are available, contact NEI for further information
  - DTT (dry-to-touch) time may be reduced with the addition of MEND catalyst. This will also reduce pot life.

### Application Notes

- 
- Self healing is initiated by heating the film to a temperature of 60°C or greater.
  - Healing response is faster at temperatures of 70°C and greater.
  - Avoid extended exposure to temperatures in excess of 140°C.
  - Depending on film thickness and curing conditions, properties such as hardness and solvent resistance, may continue to develop over a period of days to weeks.

### Storage and Handling

#### 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 prolonged or repeated breathing of vapor. Wash hands thoroughly after handling. Keep away from heat, sparks, flames, and other sources of ignition.

**Refer to SDS for complete information on the safe handling of this product.**

#### Conditions for Safe Storage

**PART A:** 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.

## NANOMYTE® MEND 1000

---

**PART B:** Keep container tightly sealed. Store at room temperature in a dry place. Keep away from sources of ignition. Protect from cold temperatures (< 60°F). Gelation as a result of low temperature exposure may be reversed by warming to ~100°F for several hours. Purge container with dry, inert gas after use.

**NOTE – Components should be stored separately until ready to use. Once mixed, coating solution should be used within the time allotted (see pot life).**

### Available Quantities

---

NANOMYTE® MEND 1000 is sold and shipped directly from NEI in liter or gallon quantities (components A & B are included with purchase). Bulk quantities and customized versions of our MEND coatings are also available upon request – contact NEI for details.

### Additional Information

---

**WARNING:** This product should not be used, stored, or transported until all handling precautions and recommendations stated in the Technical Data Sheet (TDS) and Safety Data Sheet (SDS) for this coating are understood. Exposure should be minimized and direct contact should be avoided through the observance of proper precautions, use of appropriate engineering controls, and proper personal protective clothing and equipment.

NEI Corporation believes that the information in this technical data sheet is an accurate description of the typical use of the product. However, NEI disclaims any liability for incidental or consequential damages, which may result from the use of their products that are beyond its control. Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. Therefore, it is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficacy, and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe any patent or any other intellectual right.