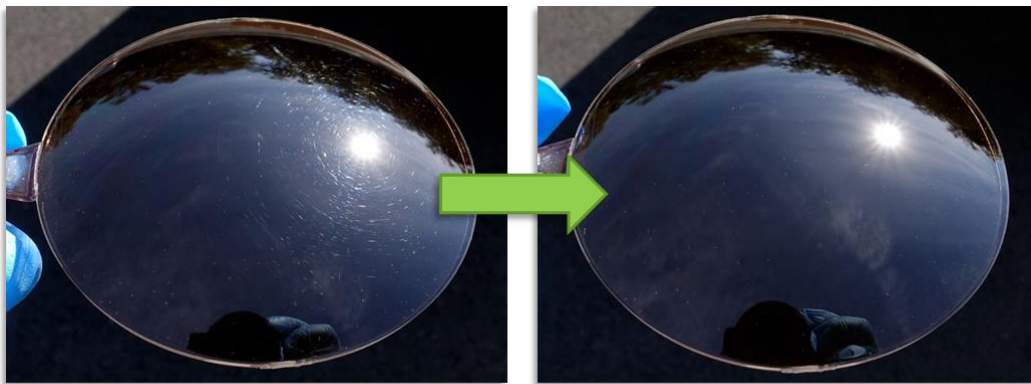


November 3, 2015

NEI Corporation Adds New Self-Healing Top Coats to NANOMYTE® MEND™ Product Line and Broadens Patent Portfolio to Include Self-Healing Pretreatment

Somerset, New Jersey (USA) – [NEI Corporation](http://www.neicorporation.com) announced today that it has expanded its NANOMYTE® MEND™ line of top coats where a *physical self-healing* phenomenon leads to gap closing and crack sealing. The innovative technology platform is applicable to a broad range of substrates such as metal, wood, and polymers – including those that require maintaining a clear glossy appearance. NANOMYTE® MEND coatings can be healed multiple times at the same defect location, thereby reducing life cycle costs by increasing the service life and reducing maintenance costs of the various substrates to which it is applied.



Scratched lens coated with NANOMYTE® MEND 1000 self-heals after application of heat

In response to the need for self-healing required in different environments, four MEND products have been introduced. MEND 1000 is based on US Patent 8,987,352, where a thermally induced *physical self-healing* phenomenon leads to gap closing and crack sealing. The self-healing 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 can be self-healed by the application of warm air for several seconds with a simple device, such as a household hair dryer. The properties of the coating – such as hardness, gloss, and refractive index – can be altered as needed for the specific application. The more recently developed, patent-pending MEND 2000 allows self-healing at near ambient temperature. MEND 3000 is a solvent-borne self-healing coating that can be cured at room temperature. MEND 4000, on the other hand, is a waterborne polyurethane-based, self-healing coating (US Patent 8,664,298). The current series of MEND coatings are based on polyurethane, but the principle is applicable to other coating systems as well – including acrylics and epoxies.

Coating	Healing Temperature	Base	Self-Healing Properties
MEND 1000	60 – 80 °C	Solventborne	Excellent
MEND 2000	Room Temperature	Solventborne	Excellent
MEND 3000	60 – 80 °C	Solventborne – RT cure	Excellent
MEND 4000	60 – 80 °C	Waterborne	Good

Self-healing principles can also be applied to surface treatments of metals. To this end, NEI has developed a series of pretreatments for different metals, where a *chemical self-healing* mechanism imparts corrosion resistance. The US Patent and Trademark Office has issued a notice of allowance for NEI's patent on another *self-healing* coating technology. The allowed claims describe a *chemical* conversion coating for protecting magnesium alloys from corrosion (NANOMYTE® PT-60). PT-60 mimics the performance of chromate conversion coatings. The nanoscale structure of the magnesium surface allows ions to diffuse on demand to the damage site, forming a barrier that prevents further corrosion. Additionally, PT-60 has been engineered to act as a tie layer that bonds the overlying primer with the metal. Excellent field performance has been observed in select applications.

The NANOMYTE® MEND™ family of coatings complement NEI's portfolio of Advanced Protective Coatings and Surface Treatments which provide tailored functionalities, such as hydrophobicity, superhydrophobicity, oleophobicity, superoleophobicity, self-healing, fog resistance, self-cleaning (or easy-to-clean), scratch resistance, anti-corrosion, and anti-icing. In addition to imparting protective and aesthetic properties, NANOMYTE® coatings lead to gains in productivity and efficiency and therefore can be used in many applications that traditionally have not used paints or coatings. The coatings are versatile and can be applied on a variety of different substrates – including glass, plastic, fiber-composite, metal, and ceramic.

[Contact us](#) for more information on our MEND coatings, including product specifications & a summary presentation.

About NEI Corporation:

NEI Corporation is an applications driven company that utilizes nanotechnology to develop and produce advanced materials. The company's core competencies are in synthesizing nanoscale materials and prototyping products that incorporate the advanced materials. Founded in 1997, the company manufactures and sells advanced materials products, provides materials development services, and performs contract-based R&D for public and private entities. NEI has built a strong manufacturing and R&D infrastructure that enables rapid transition of concepts to products. The company's products are backed by a suite of issued and pending patents and sold under the registered trademark NANOMYTE®.

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