



PRESS RELEASE

EnerCote ULX Sets the Standard for Ultra-High Temperature Linings

MISSISSAUGA, Ontario - June 30, 2016 -- FMP Coatings is pleased to announce that it has successfully completed testing on EnerCote ULX, designed for ultra-high temperature corrosion protection in immersion service at 180°C (356 °F).

FMP Coatings uses autoclave testing, in accordance with NACE 0185, to validate the immersion resistance of polymeric linings destined for high temperature service.

In order to evaluate EnerCote ULX, we used deionized water heated to a working temperature of 180°C (356°F) and pressurized under vapor. The coatings samples were evaluated for adhesion, blistering, softening, color change, and intercoat foam. The post-test result did not reveal any blistering or softening and showed an increase in adhesion.

Passing autoclave testing, at 180°C (356°F) in deionized water, is a remarkably aggressive test for any polymeric lining. The success of EnerCote ULX, under this testing protocol, sets the standard for ultra-high temperature immersion lining service.

The development team at FMP Coatings has designed a lining system that takes advantage of the durability and chemical resistance of epoxy chemistry, but which simultaneously delivers ultra-high, hot liquid resistance. This enhanced polymer performance is achieved through the use of advanced inorganic polymer crosslinking to enhance the thermal behavior of epoxy chemistry. The development team found that this crosslinking mechanism can increase the coating's glass transition temperature by as much as 50%.

"Many years, of developmental work and field testing, have gone into the development of EnerCote ULX and we are very pleased with the results of our autoclave testing." - *Dr. Yuguo Cui, Sr. Product Development Chemist.*

Conventional thermoset epoxy linings offer limited success in the protection of hot liquids, above 100°C (212°F). Epoxy coatings have an inherently low glass transition temperature, which reduces their performance under high temperature service. Coating failures such as blistering, cracking, underfilm corrosion and loss of adhesion are often the case when the polymer crosslinking is compromised.

As an epoxy polymer reaches its glass transition temperature, the polymer links weaken and the film enters a rubbery state. The weakened polymer opens up a pathway for moisture and chemicals to permeate the coating film, thus reducing its ability to adequately protect the underlying metallic substrate.

FMP developed an inorganic ceramic coating, almost 30 years ago, that was designed to protect furnace components from corrosion and high temperature oxidation. Today, the company remains committed to solving high temperature corrosion problems in the energy market, through the use of its formalized innovation process. As operating conditions change and industrial processing units run hotter, at higher pressures and for longer periods of time, corrosion continues to be a real threat to the long-term performance and longevity of metallic components.

"FMP's innovation process has become more agile, more efficient and faster when bringing products to market. We remain true to our commitment to provide the best coating solutions, as well as the most appropriate, for their intended end use. EnerCote ULX is a great example of a game-changing coating design that blends our inorganic know-how with high performance epoxy chemistry. The technology is affordable and remarkably simple to use." - *Antonio Liberatore, President.*

For more information, visit our website, www.fmpcoatings.com

FMP Coatings is a technology driven, coating development and application services company focused on delivering surface protection solutions to the power generation, downstream oil, and gas and chemical.

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