



INNOVATION IN EVERY COAT.™

# COATINGS AND LININGS FOR MARINE ENVIRONMENTS

HIGH-PERFORMANCE ASSET PROTECTION



# MARINE COATING PROTECTION FROM SHIP TO PORT

Tnemec Company, Inc., headquartered in Kansas City, Mo., has spent the last 100+ years protecting surfaces and structures around the world from corrosion with high-performance coatings and linings. We know our customers value the protection our systems provide to their vessels and equipment, and this is why we formulate the best-performing products that will keep your vessel on the water. And every order we manufacture is delivered with the expertise of our veteran team and the long history of proven performance they carry with them.

Founded in 1921, Tnemec (pronounced *tuh-KNEE-mick*) is North America's largest privately held protective coatings manufacturer. The name derives from reversing the word "cement" which was the inspiration of the company founder who discovered the natural alkalinity of cement acted as an effective corrosion inhibitor when combined into a coating formulation.

From bow to stern, shipyard to port, Tnemec coatings protect vessels and coastal structures and help them retain their longevity and brilliance in the toughest environments. We offer a full range of coatings for both vessels and the marine environments they service. From our anti-corrosion primers to the unmatched color and gloss of our finish coats, Tnemec offers the performance needed to keep your assets working and looking great for the long haul.



## PERFORMANCE MATTERS

Tnemec ensures that every product offered by our company is well-suited to exceed expectations in its intended exposure. Using only high-quality binders, resins, and pigments, Tnemec products are formulated, and have been proven, to perform both in the lab, and most importantly, in the field. Our company tests and retests every product to qualify each coating's ability to resist corrosion, UV light,

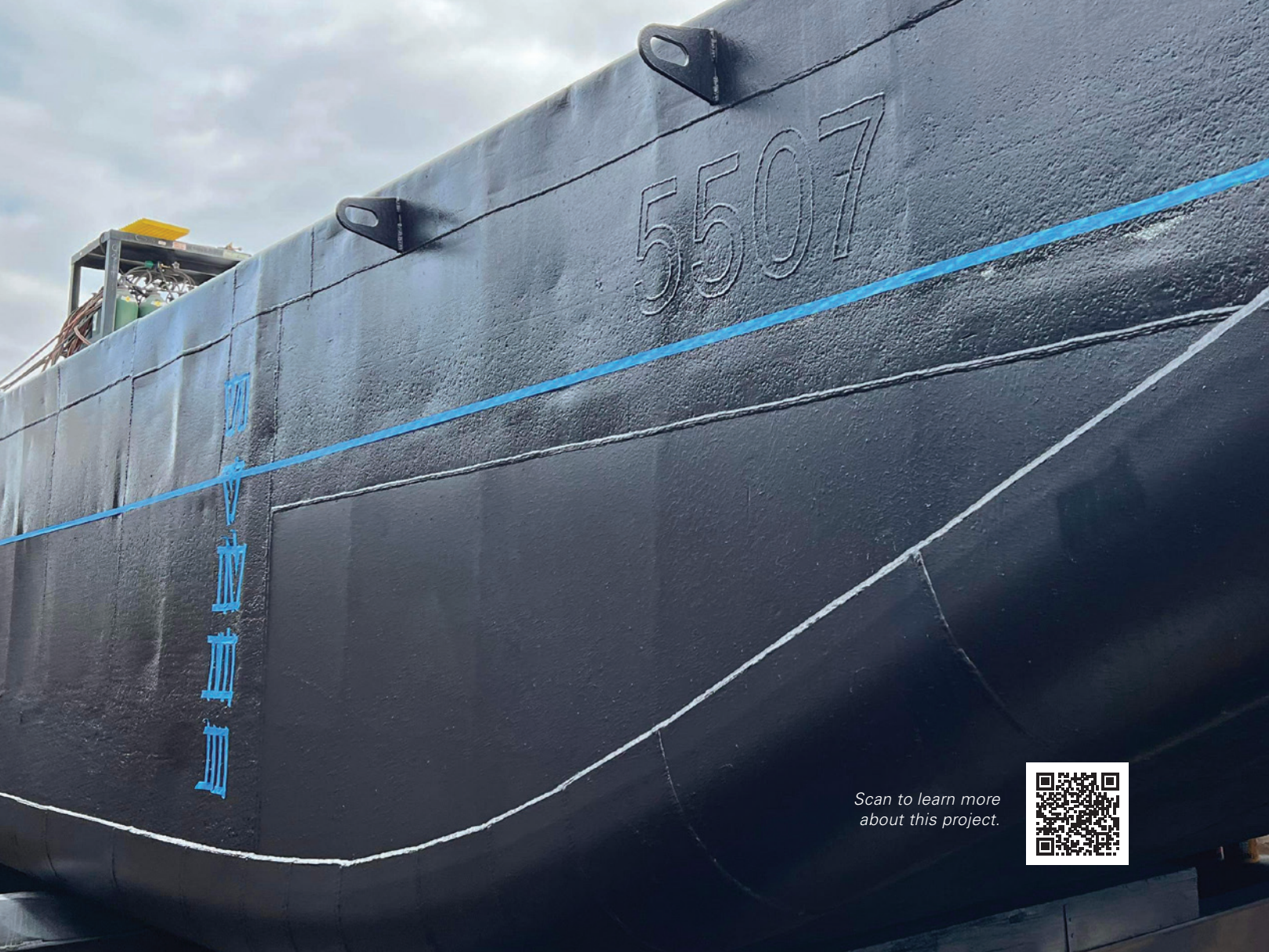
abrasion, and other causes of coating degradation so you can have the confidence that your vessel will be protected.

We know asset protection is what matters most for our customers, and that's exactly why we believe that formulation matters, testing matters, and, above all else, performance matters.

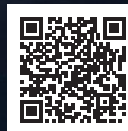


Scan to learn more about our coatings and linings for marine structures.





Scan to learn more about this project.



### Series N69 Hi-Build Epoxoline® II

An advanced-generation epoxy for the protection and finishing of steel and concrete in marine environments. It has excellent resistance to abrasion and is suitable for immersion as well as chemical contact exposure. Low VOC and fast-cure options are available. Can be used with limited surface preparation as well.

**Low VOC / Immersion service / Fast cure options**

### Series 132 ProTuff Mastic

A versatile, high-build, surface-tolerant epoxy designed for application over tightly adhered light corrosion and marginally prepared or previously coated steel, or as a primer/intermediate coat under weatherable finishes. Series 132 may be applied at low temperatures, over dew point conditions, and on damp surfaces. Good for maintenance and new construction applications.

**High-build / Surface tolerant / Low temperature applications**

### Series 118 Uni-Bond® Mastic

A high-build, rust-inhibitive, elastomeric coating formulated for exceptional adhesion and corrosion resistance over minimally prepared aged coating systems. Series 118 is an excellent choice for projects where abrasive blast cleaning of the substrate is not possible and an anti-corrosive coating is needed.

**Elastomeric / Rust-inhibitive / Minimal surface preparation / Dry-fall**

**BELOW** During salt fog testing (ASTM B 117) Tnemec's zinc-rich primer, Tnemec-Zinc, exhibited no blistering, cracking or delaminating after 50,000 hours exposure, with little creepage at the scribe and no more than 1% rusting.

Subjected to the same test, two coats of epoxy lasted through 6,700 hours while the MIO/zinc prime coat exposed to 10,000 hours showed 1/64" creepage and 3% rusting on the plane.

## PRIMERS BUILT FOR LONGEVITY

A protective primer is the first line of defense to keep your assets protected. Choosing the correct primer for your project is key to your project's long-term success. No matter what your need is, Tnemec has you covered.

Only able to do limited surface preparation? Tnemec has you covered with a variety of surface-tolerant options. Trying to apply the product to cool and/or damp surfaces? Tnemec has you covered there too.

Need something that can get put into immersion service in 24 hours? Once again, Tnemec has you covered. Here you will find a sample of our most popular primers for marine service.

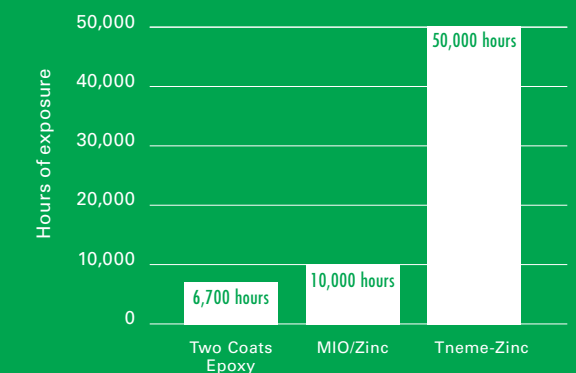
**ABOVE** This deck cargo barge received a spot coat and a prime coat of Series N69 High-Building Epoxoline II, as well as a polyurethane finish coat above the waterline.

### Series 90-97 Tnemec-Zinc

Zinc-rich primers work by acting as a sacrificial layer and a barrier to corrosion. Series 90-97 is an advanced technology, two-component, moisture-cured, zinc-rich primer providing extraordinary performance. It's user-friendly and cures rapidly so topcoats can be applied the same day.

**Corrosion protection / Rapid cure / User-friendly**

**Salt Fog Testing**  
ASTM B 117



# PREMIER FINISH COATS

For decades, Tnemec has been known for our high performance finish coats and their ability to retain color and gloss better than most. With a focus on abrasion, UV, and chemical resistance, as well as durability, Tnemec is able to ensure your vessel's coating systems will stand the test of time. We are

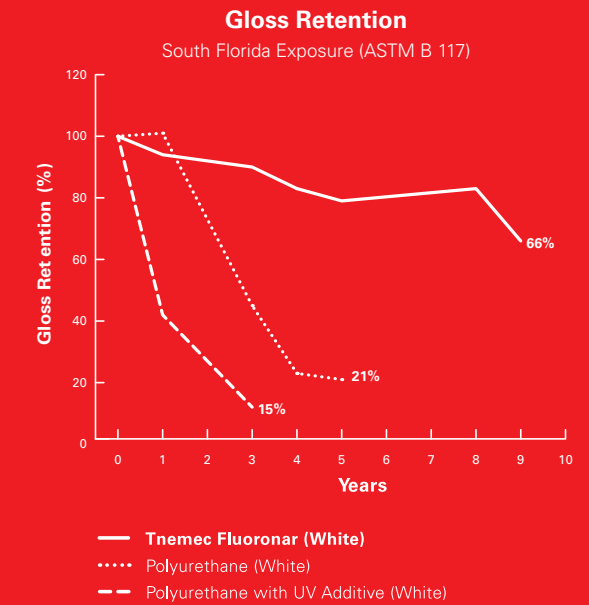
very proud of the fact that our coatings outperform industry standards, both in the lab and on the water, and we have the backup to prove it.



## Series 1070 Fluoronar®

A high-solids fluoropolymer coating that provides an ultra-durable finish with a user-friendly brush. Outstanding resistance to ultra-violet light degradation provides unprecedented long-term gloss and color retention with excellent resistance to abrasion and chalking. It is aesthetically pleasing and recommended for coastal environments and structures where extremely long-term maintenance cycles are desired.

**Exceptional color and gloss retention /  
User-friendly / Abrasion resistant**



## Series 1094 Endura-Shield®

A high gloss, user-friendly, low VOC, aliphatic polyurethane coating that provides excellent color and gloss retention for exterior applications to steel, concrete, and other substrates in commercial, industrial, and marine environments. Direct-to-Metal capability allows for a labor-saving, high-build, single-coat application.

**Excellent color and gloss retention / Low VOC /  
Labor-saving, single-coat application**

## Series 690 Tnemec Polysiloxane

An advanced technology finish coat combining low VOC with exceptional performance. Offers superior color and gloss retention for long-term aesthetics on exterior applications to steel and other substrates in commercial, industrial, and marine environments. The smooth and durable film stands up to abrasion and exterior weathering.

**Excellent color and gloss retention / Low VOC /  
Smooth and durable film**

**ABOVE** Tnemec's premier fluoropolymer topcoat, Fluoronar, shows excellent gloss retention (66%) after 9 years of South Florida exposure (ASTM B 117) compared to a polyurethane and polyurethane with UV additive.

Note: Data derived from internal Tnemec testing.

## Series V290 CRU

Extremely hard, chemical-resistant urethane coating for applications in marine environments with excellent resistance to abrasion, washdown conditions, corrosive fumes, and chemical contact. Gloss retention is among the best-air-dried finishes.

**Durable / Chemical- and abrasion-resistant /  
Good gloss retention**



## LININGS FOR TANKS AND VESSELS

Tnemec has always been at the forefront of coatings technology when it comes to coating or lining tanks of any kind. Our resolve to provide the best possible solution for chemical, corrosion, and abrasion resistance is evident in our tireless research and development within the tank industry and in everything we do. Tnemec has pioneered the industry standard in zinc-rich primer technology of the potable water industry and strives to extend

service life by focusing on the importance of stripe coating and edge retention during application. You can trust Tnemec to get the longest service life out of any of your vessels, tanks, or holds.

**ABOVE** The scrubber tanks on this 750 foot bulk carrier are protected by Tnemec coating systems.

### Series 21 Epoxoline®

High solids, immersion-grade coating offering exceptional build per coat for long-term corrosion resistance. For use on the interior and exterior of steel tanks, reservoirs, pipes, valves, pumps, and equipment, as well as other steel and concrete substrates. Specially formulated to meet the latest requirements for use in potable water applications.

**High solids / Corrosion resistant / Exceptional build per coat / NSF Std. 61-Certified**

### Series 22 Epoxoline

An advanced generation, 100% solids, high-build epoxy for the protection of steel. It provides excellent resistance to abrasion and is suitable for immersion service in potable water environments. A specialized curing mechanism allows for a faster cure response with airless spray application. Also available in a fast cure, 24-hour return to service option.

**100% solids / Abrasion resistant / Fast cure option / NSF Std. 61-Certified**

### Series 141 Epoxoline

This high-solids coating offers high-build edge protection and excellent corrosion resistance. For use on the interior and exterior of various areas in a vessel including ballast, wastewater, and other tanks. It provides excellent resistance to abrasion and is suitable for immersion service in non-potable water, crude oil, and finished fuels.

**High build edge protection / Corrosion resistant / Abrasion resistant**

### Series G435 Perma-Glaze

A versatile, thick film, 100% solids, abrasion-resistant lining specifically designed for wastewater immersion and fume environments. Series 435 provides low permeation to H<sub>2</sub>S gas, and provides chemical resistance to severe wastewater environments.

**Thick film / Low permeation / Chemical resistant**

**NSF/ANSI/CAN 600** On January 1, 2023, NSF implemented new extraction criteria for xylene, ethylbenzene and toluene. The extraction criteria found in the NSF/ANSI/ CAN Std. 600 (NSF 600) reference standard requires all coatings in contact with potable water to meet new, lower extraction levels. These new limits impact product offerings from most coating and lining manufacturers, and only Std. 61 certified coatings with extractables of xylene less than 0.09 mg/L, ethylbenzene less than 0.14 mg/L and toluene less than 0.06 mg/L, are certified for use on potable water structures and components.

Tnemec is well-prepared for these changes and has many full coating and lining systems that comply with the new NSF extraction criteria, including coating systems that have been applied to potable water tanks and piping for decades. New, innovative, low-VOC products formulated to perform like previous technologies are also available.

Scan to learn more about our NSF 600 coatings and linings.



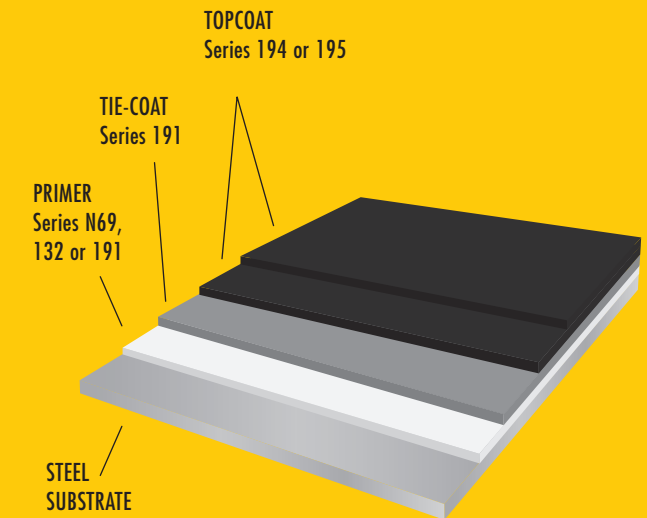
# ANTIFOULING COATING SYSTEMS

Every boat owner knows the trials and tribulations of fouling. If you don't address it, layers of slime and marine growth can increase fuel consumption, affect your top speed, and make the boat harder to maneuver. To combat the overall degradation of your vessel's exterior and aesthetic, Tnemec offers coatings specially designed for antifouling.

## 191 HullClad TC

An epoxy primer with excellent water and seawater protection. Used as an anti-corrosive tie coat within an antifoul system to give extended recoat windows.

**Anti-corrosive / Extended recoat window / Seawater protection**



## Series 194 HullClad CU

A tin-free, antifouling paint with self-polishing action for service against marine growth and organisms. The specific vehicle composition provides an advanced fusion technology during operation, resulting in long-lasting antifouling performance and extended drydock interval.

**Antifouling / Self-polishing / Extended drydock interval**

## Series 195 HullClad CU

An antifouling paint designed for extended protection against marine growth and organisms. Series 195 is self-polishing and provides advanced fusion technology during operation. This combination results in long-lasting antifouling performance and extended drydock interval.

**Extended antifouling protection**

**ABOVE** A typical Tnemec antifouling system for new construction features Series 191 HullClad TC, a high-build epoxy primer which provides a 5-day overcoat window to apply a HullClad CU topcoat.



# HELP WHEN YOU NEED IT

With coatings for almost any area of a ship and many viable options for your port equipment, Tnemec can help you keep your valuable assets protected for longer. To learn more about these options or discuss your marine projects with a local Tnemec representative, visit [tnemec.com](https://www.tnemec.com).



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