# When Performance Matters...

## ...Experience Counts

# HERESITE
## PROTECTIVE COATINGS©, LLC

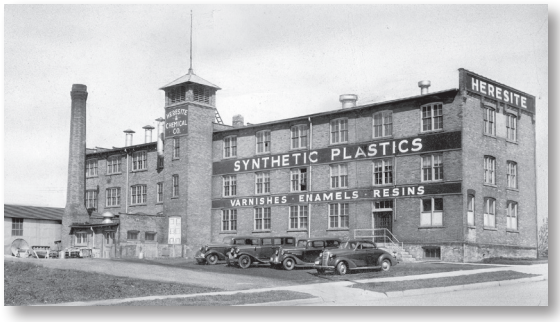
For over five decades our clients have made Heresite their coating of choice for a remarkably wide variety of applications to deliver superior corrosion protection against the harshest operating conditions.

# Experience Matters

**For over five decades Heresite has produced corrosion protection coating solutions for heat transfer applications that deliver the highest standards of performance.**

Each HERESITE® corrosion protection solution is a combination of a superior coating product - proven over years of use in the field across a wide variety of the most demanding operating environments – that can be tailored to meet the unique requirements of specific industry applications, AND a consistently superior level of customer service that produces unsurpassed customer benefits.

This combination explains why Heresite is the coating of choice for applications that require chemical or high salinity resistance properties under the harshest of industrial, coastal, or marine conditions, from Heat Transfer Equipment to Transportation and Storage.




*The Heresite plant in the 1930's*

## Phenolic Based Coatings

Because our coatings are phenolics, they have superior chemical and salinity resistance properties. Because they come from Heresite Protective Coatings, they come with an unsurpassed commitment to quality and service.

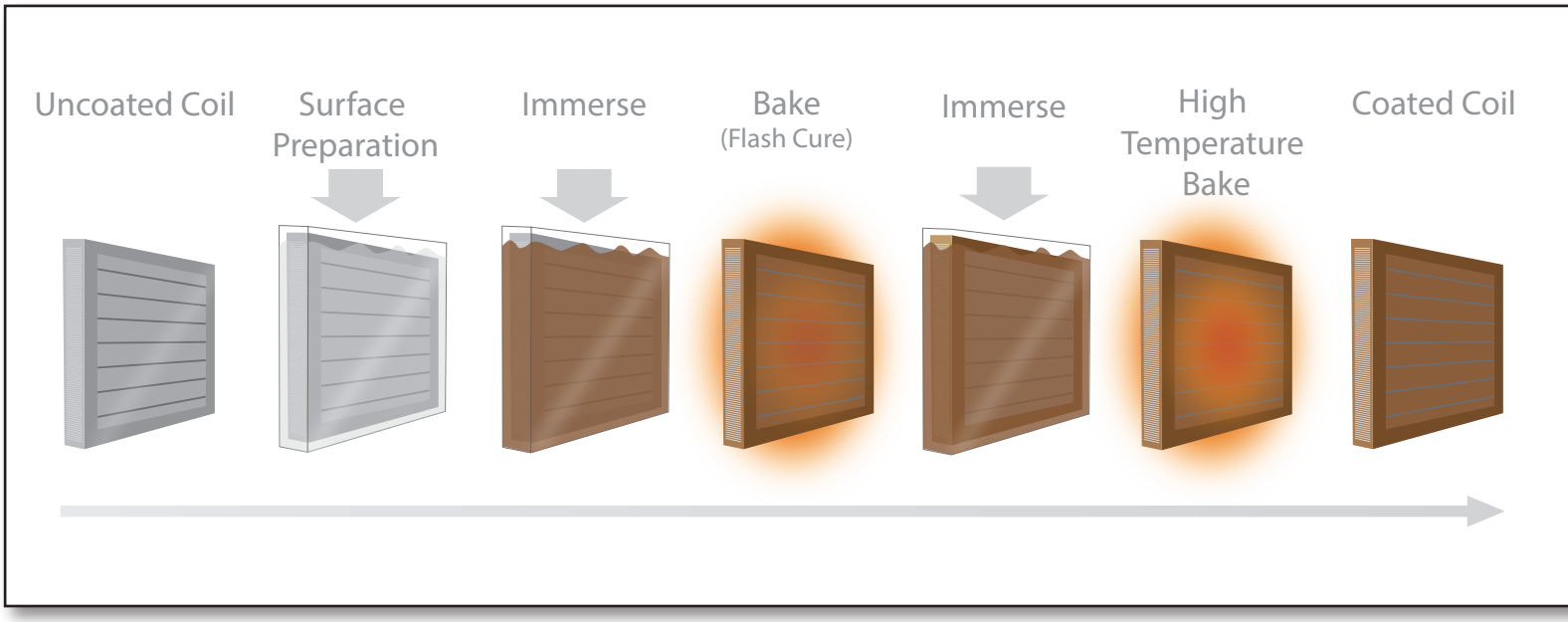
We start by manufacturing the coating using carefully selected raw materials and time tested formulas. This quality continues through the coating process which includes, surface preparation, multiple coil immersions or sprays, a bake between each coat, and a final, high temperature cure.

## Heresite Coating Products Include:

### P-413C Modified Baked Phenolic

Plasticizers have been added to this baked phenolic to make it more flexible for use on light gauge metal like finned tube coils, fans, duct. The P-413C baking phenolic will withstand exposure to practically all corrosive and chemical fumes.

Because it is a good thermal conductor, there is no need to add additional heating or cooling surface.



**VR-500 Air Dry (Spray) Phenolic**

These thin film air dry phenolics are excellent for corrosive fume atmospheres, and are particularly good in coastal and marine salt air environments. These thin film coatings exhibit excellent durability, good adhesion and flexibility. Typical applications include Structural Steel, Sewage Plants, Coastal and Marine installations, Finned Tube Coils, and HVAC/R equipment exposed to saline and other corrosive atmospheres.

## The Proven Choice

Heresite Protective Coatings provide consistent protection across a remarkable range of operating conditions and have been used for decades to solve corrosion problems in almost every industry. The two phenolic coatings used in heat transfer equipment are P-413C heat cured phenolic applied by immersion and bake procedures and the VR- 500 series air dry phenolic applied by spraying techniques.

All types and sizes of Coils, Radiators and HVAC/R equipment can be Heresite Coated with our P-413C heat cured phenolic in our facility. It will protect them against damaging environments such as salt air, acid rain, and swimming pool chlorine, as well as most other corrosive atmospheres. The coating will extend the life of the coil or radiator several times compared to an uncoated coil and the effect on heat transfer is negligible.

*Coatings can be custom tailored to clients' needs*

Heresite's continued success today is due to our commitment to combine a superior product line with individualized customer service and expert technical assistance. We strive to satisfy each customer's specialized, long-term needs for industrial coating and lining systems. There is a Heresite high performance coating system to meet your requirements.

We coat: Radiators, Finned Tube Heat Exchangers, Evaporator Coils, Fans/Blowers/Housings, Valves, Pipes, Unit Heaters, Tube Bundles, Air Compressor Coolers, Oil Coolers.

Our team of Chemists, Application Experts, and Field Representatives can analyze your operating environment and recommend a Heresite high performance coating system to meet your toughest requirements.

When corrosion protection is the challenge, Heresite is the answer.

## The Heresite Immersion Coating Process

The Heresite 5-Step coil coating process is central to our commitment of consistent and assured quality. After intake, the coil is first inspected, then a thorough surface preparation ensures the coil is ready for coating.

After surface preparation is complete, the coil is immersed in the specific coating formulation tailored to the customer's requirements.

The coated coil is then baked as a 'flash cure' and immersed a second time. This second immersion is followed by a spray coat to assure full and complete coverage. The coil then undergoes a high temperature baking, before a final inspection and packing for shipment.

For equipment with unusual dimensions, flow coating is used in conjunction with the immersion process.

## Heresite P-413C Baked Phenolic Coating

Plasticizers have been added to this baked phenolic to make it more flexible for use on light gauge metal. The P-413C baked phenolic will withstand exposure to practically all corrosive and chemical fumes and it is a good thermal conductor.

**TYPE:** Baked Phenolic

**RECOMMENDED USAGE:**

HERESITE P-413C is a high performance coating used principally for products fabricated of light gauge metal. The corrosion resistance of HERESITE P-413C appreciably increases service life of aluminum, stainless, copper, carbon steel, and galvanized equipment.

Some uses of the P-413C coating are: Radiators, Finned tube heat exchangers, Evaporator coils, Fans/blowers/housings, Valves, Pipes, Unit heaters, Tube bundles, Air compressor coolers, Oil coolers.

## Heresite P-413C

- Salt Spray: 6,000 hours per ASTM B-117
- Humidity Resistance: 2,000 hours per ASTM D2247-99
- Adhesion: 5B per ASTM B-3359
- Hardness: 8H Pencil
- Impact: >100 lbs/square inch direct per ASTM D2794 (w/primer)
- Sea Water: >1 year service history; Sea water immersion: lab simulated 1,000 hours
- Temperature Resistance: 10 cycles heat/cold; 4 hr@190°C, cool to room temperature, 4hr@ -75°C: 5B adhesion after 10 cycles per ASTM B-3359
- Temperature Limitation**:** HERESITE P-413C accepts dry heat temperatures up to 400°F (205°C)
- Mandrel Bend: Passes 1/4 inch per ASTM D522-93A
- pH Range: 1-12; based on 350 hour exposure at room temperature
- Abrasion Resistance: A 30 mg loss is observed with a CS-17F wheel and 1000 g weight after 1000 cycles

## CHEMICAL RESISTANCE GUIDE:

| *Exposure* | *Immersion* | *Fumes* |
|---|---|---|
| Acids | Good | Excellent |
| Solvents | Excellent | Excellent |
| Inorganic Salts | Good | Excellent |
| Water | Excellent | Excellent |

**COVERAGE:** Recommended dry film thickness is 2.0 to 3.0 mils.

**Heresite Protective Coatings have been used for decades to solve corrosion problems in almost every industry. These include:**

## Finned Tube Coils, Radiators, Heat Pipes, Air-to-Air Heat Exchangers, Refrigeration Coils

*Heresite coatings extend the life of coils both large and small.*

Fifty years ago, Heresite was the first company in North America to apply coatings to aluminum finned copper tube coils. Today Heresite is one of the leading aftermarket coil coatings in the world because Heresite Phenolics combine superior chemical resistance with ease of application.

The two phenolic coatings used in heat transfer equipment are P-413C heat cured phenolic applied by dip and bake procedures and VR- 500 series air dry phenolic applied by spraying techniques.

## Transportation

Heresite Coatings have been trusted for years by companies that haul chemicals to protect their tanks from the risks of corrosive attacks by the various chemicals that they transport. These include Tanker Trucks, Railcars and ISO tanks.

Heresite coatings have earned a reputation for their ability to handle severe concentrated chemicals such as 70% to 98% Sulfuric Acid, 73% Sodium Hydroxide (Caustic) at 275°F and hundreds of others.

Contact us for our Heresite Chemical Resistance Guide and our recommendations for your chemical environment. Many of the Heresite Linings meet FDA requirements of 21 CFR 175.300.

*Heresite coatings protect railcars from corrosive attacks.*

## Storage Tanks, Vessels and Pipes

For over 70 years, Heresite Coatings have been used to protect Storage Tanks, Vessels and Pipes. Heresite can provide linings to protect the interior substrates from harsh chemical environments as well as coatings to protect the vessels exterior from exposure to UV rays and other corrosive elements.

We offer both heat cured and cold set coating and linings including phenolics, epoxy phenolics, epoxies, and urethanes. Our linings are designed for extreme immersion service with resistance to acids, alkalines, and high salinity environments. They are resistant to high and low pH environments and most meet FDA requirements of 21 CFR 175.300.

*Heresite lining protects iso-tanks from harsh chemicals.*

# When Performance Counts, the Choice is Heresite

First and foremost, the coating you select has to perform. No heat transfer coating surpasses Heresite for performance in harsh environments. Through heat, cold, chemical and salt environments, Heresite protects your equipment…better and longer.

## The following are real world environments where Heresite is the choice for performance.

***When the military needs to safely destroy chemical warfare gases***, including mustard gas and corrosive chemicals, it relies on a proprietary process and coils coated with Heresite. Heresite and special alloy coils are the only corrosion protection combination that has stood up to this extreme heat and chemical environment.

***Because sewage and wastewater treatment plants must reliably operate*** through conditions that include severely corrosive chemicals, including hydrogen sulfide and sulfuric acid, Heresite is the choice for coated coils and equipment used by plants around the country.

***When the Marines needed a coating to extend the service life for radiators*** in their Amphibious Landing Craft they chose Heresite. Because of their Heresite coating, these radiators, while continuously exposed to severe salt environments, can operate without failure.

***The U.S. State Department specifies Heresite*** coated coils to assure reliable performance for the HVAC installations in the embassies it maintains in coastal installations in all parts of the world.

***When stainless steel coils failed***, a major glass manufacturer turned to Heresite coated coils to endure placement in one of their harshest manufacturing process environments.

***A major international oil services firm uses Heresite to assure 24/7 operation*** in environmentally harsh and corrosive salt and chemical environments, for its offshore platform's radiators around the world.

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