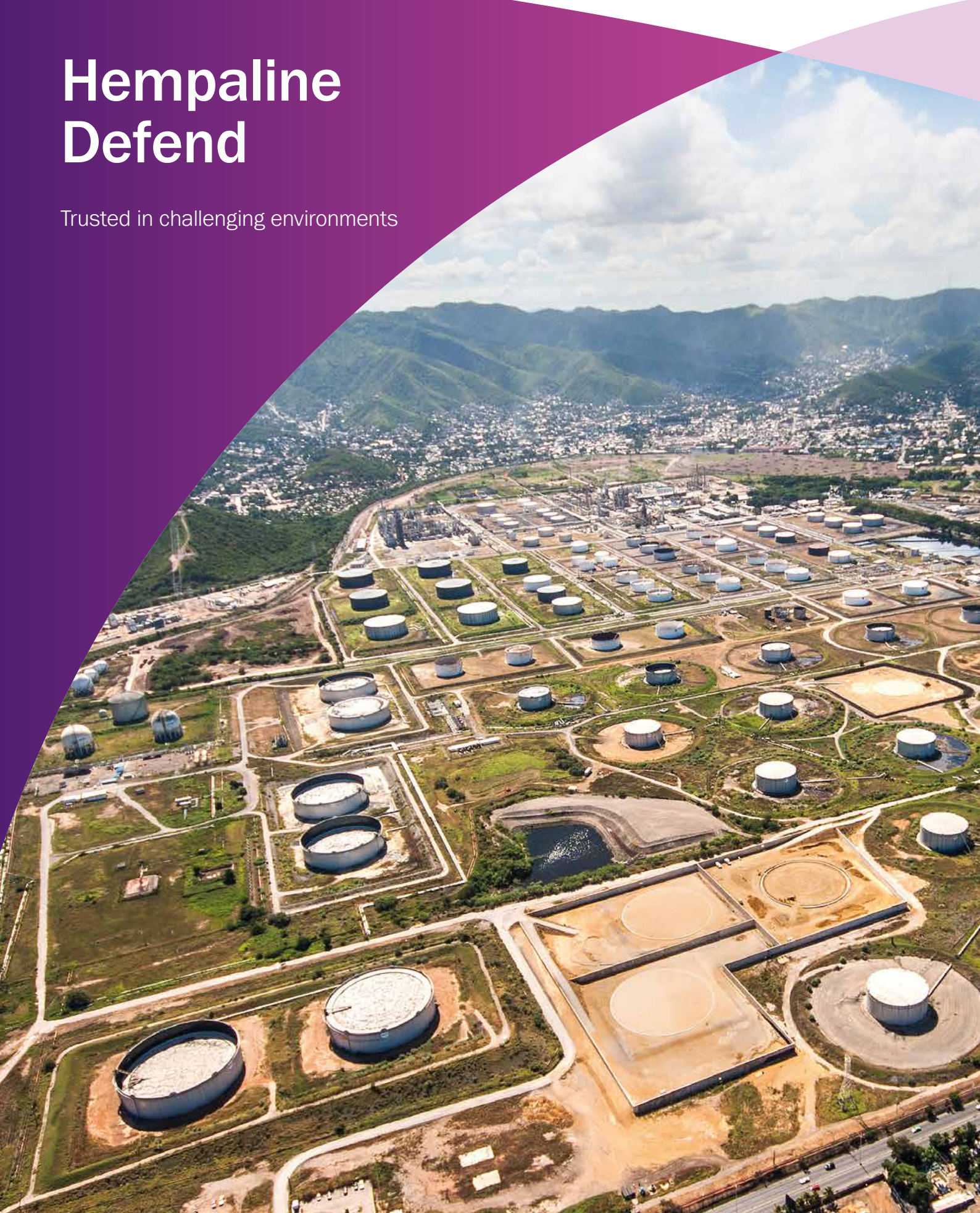


Hempaline Defend

Trusted in challenging environments



Trusted in challenging environments

Hempel was founded in 1915 and is today one of the world's leading manufacturers and suppliers of high-performance, protective linings. Hempaline Defend is Hempel's dedicated speciality lining brand for the most challenging environments.

Hempaline Defend high-performance lining solutions are specifically designed for the aggressive environments found in the oil & gas and chemical industries. They ensure superior protection against corrosion, high temperature, extreme abrasion and a wide range of chemical and solvent materials – to reduce your maintenance costs and maximise your uptime.

Here at Hempel, we recognise the need to have a clear view of the conditions affecting the assets we aim to provide protection for. Before making any recommendation we seek to understand the service environment, considering such factors as temperature, pressure, pH swings and cleaning processes, to ensure the best chance of lining success.

Our Hempaline Defend Linings are used for internal protection of storage tank bottoms, process vessels, acid tanks and secondary containment areas.

Hempaline Defend helps you to increase profits from your assets by maximising uptime through longer service and reduced maintenance, whilst minimising disruption with our fast return to service systems.

We combine our extensive knowledge of your particular business with a focus on the linings challenges you face. This allows us to provide you with trusted lining solutions to extend the life cycle of your assets.



Areas of use for Vinyl Esters

Hempaline Defend 740
Used as an internal lining for chemical storage or exposure where acidic environments at elevated temperatures and pressures might be experienced in oil & gas and chemical processes.

Areas of use for Epoxies

Hempaline Defend 400
Excellent resistance to crude oil up to 60°C/140°F, aromatic and aliphatic solvents, aviation fuels and gasoline.

Hempaline Defend 630
High performance tank lining for the storage of a wide range of petrochemicals including (but not limited to) crude oil up to 120°C/248°F, MTBE, produced water, alcohols, aromatic and aliphatic solvents, aviation fuels, gasoline blends, select acidic and caustic chemicals.

Hempaline Defend 640
Solvent free high performance glass flake Novolac epoxy lining with excellent chemical resistance to a wide range of chemicals and solvents. It is reinforced with a glass flake filler which reduces permeability while enhancing the lining's mechanical properties and chemical resistance, making it a preferred choice for areas subject to impact and abrasion. The product is designed to be a single coat application.

Ask for our comprehensive Chemical Resistance Guide.



Optional primers if required:

Hempaline Prepare 110
A high performance epoxy sealer for use on concrete*.

Hempaline Prepare 120
A two-component vinyl ester sealer for use on steel and concrete.

Hempaline Prepare 130
A chemical resistant epoxy Novolac, for use as a holding primer for internal tank linings. Optically activated pigment version available for rapid defects detection.

*Traditional tank lining primers may be used for epoxy linings before the application of Hempaline Defend coatings as part of a detailed specification.

Reduce your costs and downtime with Hempaline Defend linings

Hempaline Defend high-performance lining solutions are specifically designed for the aggressive environments found in the oil & gas and chemical industries.

Providing unbeatable protection against corrosion, extreme temperatures, and harsh abrasion, they can withstand a broad spectrum of chemical and solvent materials. By reducing your maintenance costs and maximising your uptime, Hempaline Defend empowers you to stay ahead of the game.



High productivity

- Fast return to service with full cure in 24 hours or less
- Fast single coat application with high DFT
- Extended overcoating and inspection window



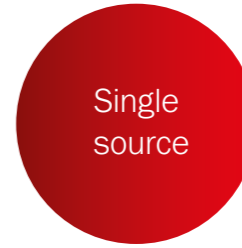
Easy application

- Simple application through airless paint spraying
- Solvent-free coatings reduce the need for rework
- Suitable for maintenance, newbuild and pit filling projects



Long lasting durability

- Tested and proven performance
- API compliant
- Stronger chemical resistance



Single source

- Simple specification with a single product for different applications and tank sizes
- WRAS approved for refurbishment of potable water tanks
- Can be combined with mat-reinforced systems

Your storage tank and containment area projects are unique. That's why we combine our extensive technical knowledge with proven lining solutions to cater to your specific tank lining needs.

Hempaline Prepare 130 Optically Activated Pigment (OAP) Version

The OAP primer deploys an innovative technology during tank inspections to visually identify low film thickness and other defects on substrate materials.

Using a fluorescent pigment that illuminates once exposed to a UV Flashlight, rapid visual checks can identify defects found on substrates for faster return-to-service, safe and cost-effective downstream operations.



Hempel makes the grade with refinery crude storage tank lining



A major United States oil refinery chose our Hempaline Defend 630 Solvent Free Novolac Epoxy Lining as an interior tank lining for a 200 foot / 61 metre diameter sour crude oil storage tank.

With rapid curing, Hempaline Defend 630 returned the customer's tank back to revenue producing service fast, with a lining that can be trusted for lasting corrosion protection.

At a glance	
Customer	Major US Refinery
Coating system	Hempaline Defend 630 Novolac Epoxy Lining
Total litres	2,000
Application	Airless spray

Advanced oil tank corrosion protection for a major US oil company



A major US oil company was experiencing corrosion in its sour crude oil tanks. Chemicals and water in the oil were causing severe pitting and corrosion at the bottom of the storage tanks. To combat this, we recommended Hempaline Defend 740 Vinyl Ester Mat Reinforced Lining. The addition of the reinforcement mat not only affords greater barrier properties but contributes to the materials ability to withstand flexure and impact.

Our products have provided proven long term performance for the customer who now specifies Hempaline Defend Linings for all its crude oil tanks.

At a glance	
Customer	Major US oil company
Lining system	Hempaline Defend 740 Vinyl Ester with mat reinforcement
Total litres	2,300

Fast return to service

A major Middle Eastern gas production facility needed to reline an internal tank bottom. The tank was taken out of service ready for it to be prepared and a new lining installed.

Due to Hempel's local manufacturing and stock availability, the project was successfully completed on time and the unit quickly returned to full production.

“This has helped our projects department and contractor to complete the internal painting and handover of the tank to operations without much delay. Thank you for your prompt solution to our issues.”

Operation projects department



As a world-leading supplier of trusted coating solutions, Hempel is a global company with strong values, working with customers in the decorative, marine, infrastructure and energy industries. Hempel factories, R&D centres and stock points are established in every region.

Across the globe, Hempel's coatings protect surfaces, structures and equipment. They extend asset lifetimes, reduce maintenance costs and make homes and workplaces safer and more colourful. Hempel was founded in Copenhagen, Denmark in 1915. It is proudly owned by the Hempel Foundation, which ensures a solid economic base for the Hempel Group and supports cultural, social, humanitarian and scientific purposes around the world.

Hempel A/S

Lundtoftegaardsvej 91
2800 Kgs. Lyngby
Denmark

Tel: +45 4593 3800
Email: hempaline@hempel.com
[hempaline.hempel.com](https://www.hempaline.hempel.com)