Reducing project complexity and costs with single source tank linings

How versatile Hempaline Defend coatings can reduce logistics, storage costs and complexity in tank lining projects in the oil & gas and chemical industries.

In facilities with storage tanks, process vessels, mobile tanks or containment areas, asset maintenance can be costly and time consuming. These assets are exposed to extremely harsh conditions, including a wide range of temperatures, chemicals and solvents – and they need regular maintenance to ensure long-term integrity and performance.

For asset operators and applicators, having a single product that can be used in a wide range of new construction and maintenance scenarios on multiple tanks and assets, can have significant benefits, including:

- Reduction of complexity in logistics and storage (fewer products to transport and store)
- Simpler procurement and supply (fewer products with larger volumes from the same supplier)
- Lower risk of incorrect application (applicators are experienced with the product)
- Lower risk of using the wrong product (simpler specification with multi-use product)
- Waste reduction (fewer paint types results in less packaging and residual paint waste)

Protecting multipurpose and dedicated tanks with Hempaline Defend epoxy linings

Hempel developed its Hempaline Defend tank linings to reduce project complexity for application companies and asset owners in new construction and maintenance scenarios. Hempaline Defend linings can withstand a broad spectrum of chemicals and temperatures, and they provide optimum protection on both multipurpose and dedicated storage tanks in many different operating conditions.

The range includes:

- Hempaline Defend 630, a solvent-free Novolac epoxy that provides outstanding resistance to a wide range of chemicals at high temperatures up to 120°C (248°F), including crude oil, hydrocarbons, alcohols, fatty acids, alkalis and process water – and is also WRAS approved for contact with potable water
- Hempaline Defend 640, a solvent-free glass flake Novolac epoxy that delivers similar performance to Hempaline Defend 630 but has better abrasion resistance
- Hempaline Defend 400, a solvent-free epoxy with excellent resistance to crude oil, hydrocarbons and mild chemicals at temperatures up to 60°C (140°F)

Reducing project complexity with multipurpose products

To reduce stock and logistical complexity, Hempaline Defend 640, Hempaline Defend 630 and Hempaline Defend 400 can be used in many different maintenance and new construction scenarios. These include:

- One or two coat systems, with high dry film thickness if required

- Pitting repair
- Reinforced systems based on chopped glass fibres or glass fibre mats*
- Surfacers and fillers (when mixed with silica sand) to fill areas with overlapping steel plates and chimes (joints between the tank bottom and walls) in order to ensure a smooth even surface before applying the specified coating system
- Cold repair of small perforations (less than 25 mm in diameter and occupying less than 1% of the total steel area) when welding is not possible or desirable

Higher productivity with fast-curing systems

In both new construction and maintenance scenarios, deadlines are often short. As a result, any increase in productivity is desirable. This is particularly true in maintenance scenarios that require assets to be taken out of service, as this leads to service disruption and loss of revenue. Hempaline Defend 640, Hempaline Defend 630 and Hempaline Defend 400 can be used to reduce increase productivity and shorten project completion times.

All products are available in two versions: a standard curing system that enables return to service in just 72 hours at 20ºC; and a fast return to service system (FRTS) that enables return to service in just 24 hours at 20ºC. All versions are available in two different colour shades, white and light blue, and use the same base. Therefore, one base can be used for two different curing versions and two different shades, depending on the hardener, further reducing project complexity.

Find out more

- Explore our Hempaline Defend epoxy coatings
- Contact Hempel for more information and advice

The values presented in this document are for general information purposes only. For specific values and specifications, please contact your local Hempel representative.

* These systems are recommended if the substrate is moderately or severely pitted. Chopped glass fibre reinforced systems are more cost efficient than mat-reinforced systems, as they reduce build time by around 30% and the caulking operation (performed before application of the reinforced system) is reduced by approximately 50%.