

Truck & Trailer coating systems

Superior corrosion protection with lower
environmental impact and higher throughput



It's time to **Avantguard**

Superior performance in the toughest conditions

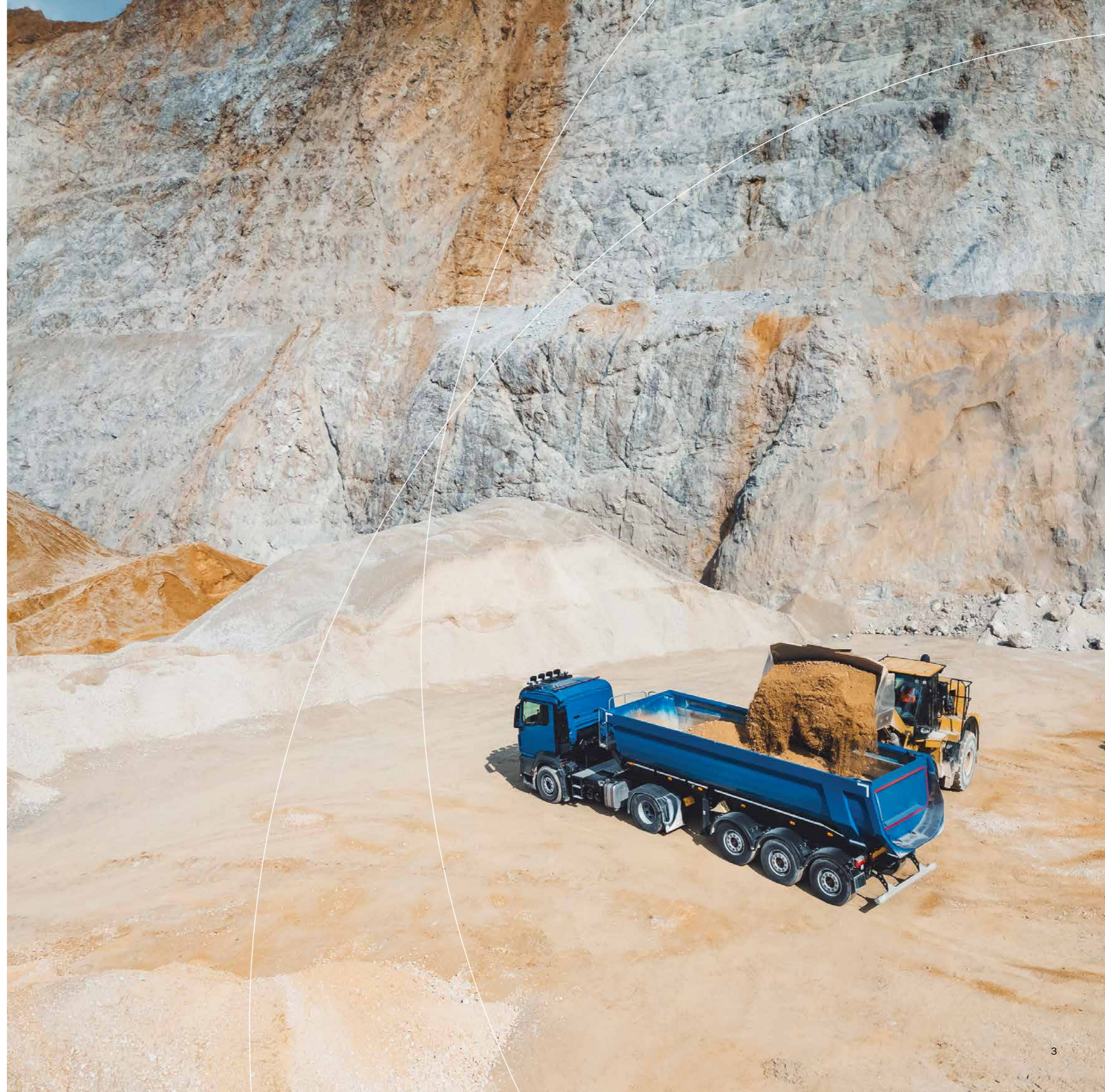
Aggressive weather. Stone chips and salt. Petrol and other chemicals. Your trucks and trailers are subject to some of the harshest operating conditions imaginable. From the superstructure to the axels and chassis, they need a high-quality protective coating system to keep them performing well and looking good throughout their entire service lives.

That's what you get with Hempel. Our coating systems are trusted by renowned truck and trailer producers across the globe to extend the lifetime of heavy-duty vehicles and machinery in the toughest conditions.

Not only that, they also make your production processes leaner and more efficient, while bringing down your carbon footprint.

“Our vehicle bodies are exposed to harsh weather and salt. In Hempel and their Avantguard® technology, we have found the ideal partner to counteract this.”

**Christian Huber,
CEO at Jotha Fahrzeugbau**



- **UP TO 60% LOWER OPERATIONAL COSTS**

Cut application time and reduce energy consumption with lower paint shop temperature requirements.

- **UP TO 65% LOWER EMISSIONS**

Reduce your CO₂ and VOC emissions by lowering paint and energy consumption compared to standard zinc-rich coating schemes.

- **UP TO 35% FASTER APPLICATION**

Streamline your workflow and reduce your application time with a 2-coat solution that's fast and easy to apply and has a best-in-class drying time.

Faster, stronger and more productive

Our truck and trailer coating systems are based on Avantguard®, a high-performance zinc coating technology that's setting new standards for quality and application speed. Avantguard has been proven in numerous industries, from mining to power generation and offshore wind.

- Superior corrosion protection with lower paint consumption
- Higher durability with superior mechanical strength
- Reduced rust creep and superb crack resistance
- Fast throughput and very good application properties
- Low VOC and CO₂ emissions with unsurpassed performance

To ensure you get maximum benefits from Avantguard, we can work with you to optimise your coating application line setup. The result is better protection for your trucks and trailers, with lower operating costs, reduced emissions and higher productivity.



Switch to our advanced coating systems today to give your products and manufacturing a cutting-edge

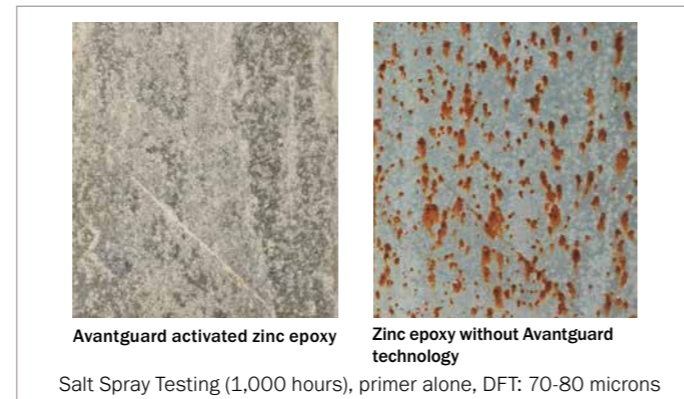
Increase your corrosion protection...

Our truck and trailer coating systems are based on our patented Avantguard® activated zinc technology, giving your superstructures, chassis, axels and other components premium anti-corrosion protection. In third-party neutral salt spray tests and real-life applications, Avantguard primers have consistently shown superior anti-corrosive performance compared to standard zinc-rich coatings.

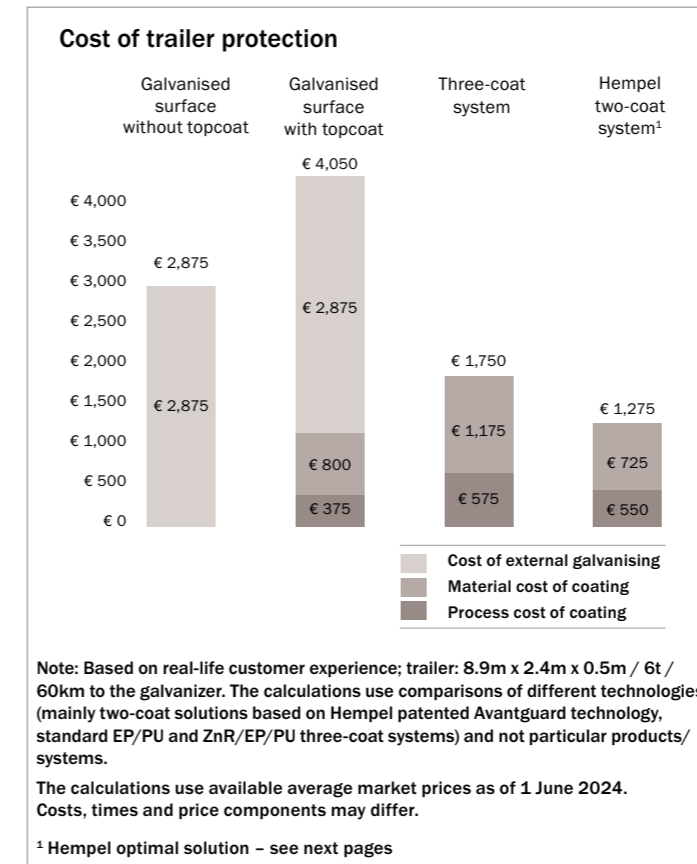
Here's why.

In a standard zinc epoxy primer, only one third of the zinc content is typically effective in protecting the steel from corrosion. Avantguard is different. Its unique Triple Activation technology fully utilises the zinc content to deliver unrivalled anti-corrosive protection.

- **Barrier effect:** Zinc salts formed throughout the film increase barrier properties to lower water permeability.
- **Inhibitor effect:** Avantguard captures the ions and creates a powerful inhibition effect to combat rust.
- **Galvanic effect:** The unique activation process in Avantguard efficiently utilises the zinc content and improves galvanic protection.



...with higher productivity and lower costs



With our innovative Avantguard®-based two-coat systems, you can reduce the number of coats or coating thickness required, while giving your components unbeatable corrosion protection. The result? You get lower process costs and emissions, while significantly stepping-up the speed of your production line.

Designed for line application, our Avantguard systems are fast drying and easy to apply with various application methods. Depending on which protection method you currently use, you can considerably reduce your material and process costs, as shown here.

Please contact us at hempelindustrial@hempel.com for further information

Meet Hempaprime Shield 820 your activated zinc epoxy primer

Based on proven Avantguard technology, our Hempaprime Shield 820 primer gives you up to 50 per cent longer durability, as well as excellent stability, sprayability, film formation, and sag resistance during application. It's less sensitive to humidity and temperature than conventional zinc epoxies – and delivers improved mechanical strength and less cracking.

Visit [hempel.com/avantguard](https://www.hempel.com/avantguard) to find out more.



Which system is best for you?

Every production line is different. So we work with you to ensure the optimum solution for your production setup, designing the final coating system to suit your exact requirements.



When **PRODUCTIVITY GAINS** are your priority

Significantly improve your productivity and lower your costs with extremely fast throughput compared to typical 2-coat systems.

Available in a range of finishes: mat, semi-mat, semi-gloss, gloss and high gloss (10-95GU at 60°C)*.

- 35% lower paint consumption
- 45% lower VOC emissions
- **Very good** performance level:
 - **C5 High** according to ISO 12944-6
 - 1,440 hours Neutral Salt Spray Testing (ISO 9227) with <1.5mm rust creep



When you want to hit **ENVIRONMENTAL TARGETS**

Lower your VOC emissions with a high-performance waterborne topcoat (co-solvent content <100 g/l) that complies with the strictest requirements for environmental protection.

Available in a range of finishes: mat, semi-mat, semi-gloss and gloss (75-85GU at 60°C)*.

- 40% lower paint consumption
- 70% lower VOC emissions
- **Very good** performance level:
 - **C5 High** according to ISO 12944-6
 - 1,440 hours Neutral Salt Spray Testing (ISO 9227) with <1.5mm rust creep



When **SUPERIOR DURABILITY** is your goal

Enhance your vehicle longevity with a low-VOC premium coating system that delivers unbeatable resistance to abrasion and mechanical damage in the toughest conditions.

Available in a very high gloss finish (>90 at 60°C)*.

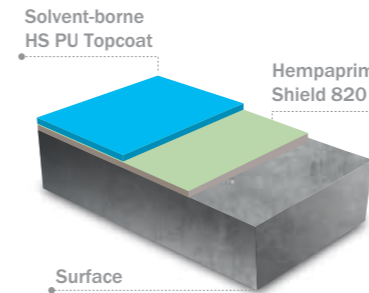
- 45% lower paint consumption
- 65% lower VOC emissions
- **Excellent** performance level:
 - **Two times C5 High** according to ISO 12944-6
 - 2,880 hours Neutral Salt Spray Testing (ISO 9227) with <3mm rust creep

Comparative standard coating system

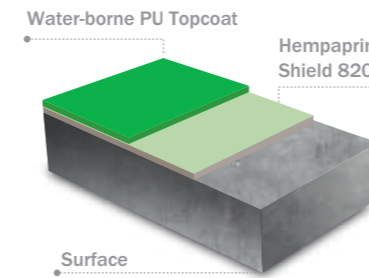
Coating system: Zinc-rich epoxy / Polyurethane	DFT	VOC per liter	Theoretical spreading rate ⁽¹⁾ per m ²	Paint consumption per 100,000 ⁽²⁾ m ²	VOC per 100,000 ⁽²⁾ m ²
Standard solvent-borne zinc-rich primer	60 µm	360g	10.0 L	10,000 L	3,600 kg
Standard solvent-borne primer	60 µm	540g	7.5 L	13,333 L	7,200 kg
Standard solvent-borne PU topcoat	60 µm	420g	9.2 L	10,909 L	4,582 kg
Total	180 µm			34,242 L	15,382 kg

Note: All percentages are calculated using the values of a typical 3-coat system as 100%. *Gloss levels depend on application, film-thickness and curing conditions.

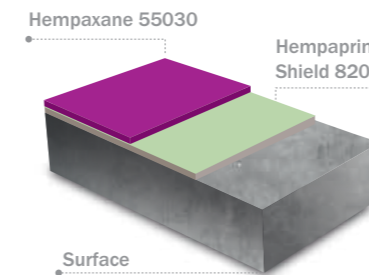
Whatever your needs, we can supply the ideal coating system for your production line and vehicles. Below are some of our most popular two-coat systems for trucks and trailers.



Coating system: Zinc-rich epoxy / Polyurethane	DFT	VOC per liter	Theoretical spreading rate ⁽¹⁾ per m ²	Paint consumption per 100,000 ⁽²⁾ m ²	VOC per 100,000 ⁽²⁾ m ²
Hempaprime Shield 820⁽³⁾	50 µm	370 g	9.5 L	8,772 L	3,246 kg
Solvent-borne HS PU topcoat ⁽³⁾	60 µm	420 g	9.2 L	10,909 L	3,246 kg
Total	120 µm			19,681 L	7,827 kg



Coating system: Zinc-rich epoxy / Polyurethane	DFT	VOC per liter	Theoretical spreading rate ⁽¹⁾ per m ²	Paint consumption per 100,000 ⁽²⁾ m ²	VOC per 100,000 ⁽²⁾ m ²
Hempaprime Shield 820⁽³⁾	50 µm	370 g	9.5 L	8,772 L	3,246 kg
Water-borne PU topcoat ⁽³⁾	45 µm	90 g	10 L	10,000 L	900 kg
Total	105 µm			18,772 L	4,146 kg



Coating system: Zinc-rich epoxy / Polyurethane	DFT	VOC per liter	Theoretical spreading rate ⁽¹⁾ per m ²	Paint consumption per 100,000 ⁽²⁾ m ²	VOC per 100,000 ⁽²⁾ m ²
Hempaprime Shield 820⁽³⁾	50 µm	370 g	9.5 L	8,772 L	3,246 kg
Hempaxane Light 55030 ⁽³⁾	75 µm	200 g	13.7 L	9,146 L	1,829 kg
Total	120 µm			17,843 L	5,075 kg

All values are based on real-life customer experience. Numbers may vary depending on the customer and production process.

¹ Theoretical spreading rate is indicated for the thinned coating and the DFT value given in the first and second column.
² 100,000 m² corresponds approximately to 500 flatbed trailers.
³ The amount of thinner may vary depending on line conditions, the shape of the coated part and aesthetics required.

Truck & Trailer coating systems

As a world-leading supplier of trusted coating solutions, Hempel is a global company with strong values, working with customers in the protective, marine, decorative, container and yacht 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.

CORPORATE HEADQUARTERS

Hempel A/S
Lundtoftegårdsvej 91
DK-2800 Kgs. Lyngby
Denmark

Tel: +45 4593 3800
Fax: + 45 4588 5518