

Sports and leisure facilities

Global experience and trusted solutions

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World-leading coatings supplier

Hempel was founded in 1915 and is today one of the world's leading manufacturers and suppliers of coating solutions. Our advanced protective and decorative coatings can be found on millions of surfaces around the globe.

From the world's longest bridges and tallest skyscrapers to airports, sports stadia and civil structures, our coatings protect your assets against corrosion in many different and challenging environments.

Our history is rooted in protective coatings for the extreme conditions experienced in the Marine, Decorative and Protective industries, so you can be assured that we offer trusted technology, expert technical service and reliability.

With our vast expertise and knowledge, you know that by choosing Hempel, you are choosing a brand you can trust.

Tailored for sports and stadia

Modern sports venues and leisure facilities are designed to be multi-functional, accommodating a range of sporting and entertainment events, retail and commercial activities.

These venues often use steel and concrete in their construction to create sustainable and iconic additions to the landscape. The increasing sizes and larger open aspects of these venues present additional challenges for the protective coatings required.

We understand the difficulties and offer a range of high performance coatings that address these specific needs, backed up with a technical service that is second to none.



Global service

We want to give you the right products on site, on time, every time. With the support of our 28 manufacturing plants and over 150 stock points worldwide, we offer a flexible service to all our customers. A service that we believe is second to none.

Proven performance

Our range of high performance protective coatings offer advanced protection and optimised application for a durable finish that looks good for longer for all arenas and climates. With a proven track record, we are a trusted protective coatings partner for our sports stadia and leisure venue customers around the world.

Professional support

Our customers know that specifying the right products is With 15 global research and development facilities, we work crucial when designing structures, to ensure corrosion and locally with you to provide the right solution for your project. fire protection, good appearance and minimum maintenance. Our research and development teams are committed to Our multinational, globally based teams are uniquely continuous development of innovative and effective speciality positioned to ensure the smooth running of your project. coatings to give you durable protection whilst ensuring From planning to completion, specification to application, environmental responsibilities are met. we have key people to support you both off and on site.

Innovative solutions

Avantguard®

Superior corrosion protection

Here at Hempel, we strive to develop coatings that are ever stronger to protect our customers' assets around the world against the corrosive effects of industry and nature alike.

Avantguard is our innovative, award winning¹ anti-corrosion technology, based on activated zinc. Our patented Hempadur Avantguard coatings have been proven to deliver superior corrosion protection compared to competitor zinc rich epoxy products².

Strengthening the system at its core, Avantguard gives the full coating system enhanced corrosion performance.

- Redefining protection with reduced rust creep and proven, superior corrosion protection².
- Redefining durability with improved mechanical strength and significantly improved crack resistance through high flexibility and self-healing of micro cracks.
- Redefining productivity by being fast drying with best-in-class³ overcoating intervals. Easy to apply, even in high temperatures and humidity, there is less rework due to cracking, as the coating is more tolerant, even with high DFTs.

"Avantguard has a self-healing effect on micro cracks, which is something that we've never seen before. The insoluble salts which are created in the unique zinc activation process actually occupy the space left by the microcrack, further preventing the development of a more serious crack."

Josep Palasi Hempel Strategic Technology Director These activated zinc primers reduce the effects of corrosion, offering advanced protection and increased durability for all-round performance. Unlike standard zinc epoxies, Avantguard is effective using all three methods of anti-corrosive protection.



Inhibitor

Improved barrier properties Avantguard displays low water permeability. The salts produced by the unique zinc activation process fill any space within the film, sealing it and enhancing the barrier properties of the coating.

Inhibition effect for improved protection

The zinc salts formed contain high levels of chloride ions that are captured as they are diffused from the environment through the film. This reduces the concentration of corrosive agents that reach the steel surface.

Galvanic

STEEL



Activated zinc gives excellent anti-corrosive properties In the presence of oxygen, water and salt, zinc reacts faster than steel. This delays the corrosion process for much longer.

Hempadur Avantguard 750 Anti-corrosive performance in compliance with NORSOK M-501 which is faster curing, easy to apply and retains its properties even at excessive application.

Hempadur Avantguard 550

Anti-corrosive performance in compliance with ISO 12944 C5 high, which is fast curing and easy to apply.

Compliance

Complies with NORSOK M-501 Ed. 6 (ISO 12944:2018 Part 9) and Level 2, type II in SSPC Paint 20, 2002.

Utilises ASTM D520, type II zinc dust.

Complies with the requirements for Level 3, type II in SSPC Paint 20, 2002.

Utilises ASTM D520, type II zinc dust.

1. Avantguard won the prestigious 2014 European Frost & Sullivan Award for New Product Innovation and NACE's MP Corrosion Innovation of the Year Award 2015.

2. This superiority has been independently proven by third party laboratory neutral salt spray tests according to ISO 9227. In this test, steel protected with Avantguard produced

a lower evolution of rust creep, assessed according to ISO 12944-6, when tested up to 3x the duration for C5 high environments.

3. Avantguard's overcoating interval is a minimum of 33% faster than competitor zinc-rich epoxies when comparing product data sheets.

Hempacore

Intumescent coatings for passive fire protection

A key consideration in the construction of any sporting facility is to keep the risk of fire to a minimum, and, in the event of a fire, to protect the people during evacuation and reduce fire damage to the building. In extreme cases, steel can buckle and collapse in a matter of minutes.

We understand that you need fire protection you can trust. Our Hempacore range is designed specifically for the construction market. It can be specified with up to two hours protection of the integrity and strength of steel structures, helping to prevent the collapse of buildings in case of fire, whilst helping to provide time for people to evacuate.

Our Hempacore product range includes advanced solvent-based acrylic technology. This allows easy application with the advantage of low VOC and the ability to spray high DFT in a single coat for a fast drying finish.

In addition the Hempacore range includes waterborne coatings that comply with the latest environmental standards for green building, suitable for in shop and on site applications.

Hempacore is proven to give you consistent, durable and efficient fire protection.

Certifications/approvals

With the Hempacore intumescent range, you get coatings with a very wide scope of both international and local approvals.

| The global approvals include: |
|-------------------------------|
| BS 476-21 |
| EN 13381-8 |
| GB 14907 |
| GOST 53295 |
| AS1530.4 |

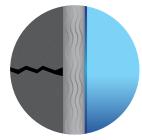
Sports and leisure facilities

Contex

Protective coatings for concrete



Tough climates require tough protection. Our Contex range uses advanced technology to deflect solar rays, reduce heat conductivity, protect against carbonation and enhance crack bridging. Ideally suited for buildings, stadia, roads and bridges, it is available in a variety of finishes and textures that prolong the life of concrete surfaces.



| Product | Benefits |
|---|---------------------------------------|
| | Outstanding crack bridging properties |
| Contex EM Contex EM is waterborne elastomeric topcoat with outstanding dynamic and static crack bridging properties to accommodate structure movements. | Excellent anti-carbonation properties |
| It is based on 100% pure acrylic binders and provide effective protection against harsh climatic conditions. The breathable smooth textured surface offers brilliant anti-carbonation properties. | Excellent UV resistance |
| oners binnant anti-carbonation properties. | Exceptional weathering resistance |
| | |
| Product | Benefits |
| | Outstanding weather resistance |
| Contex Topcoats Contex topcoats are known for their outstanding colour retention, allowing | Excellent UV resistance |

exterior walls to maintain their appearance even in the hottest climates. They are available in both waterborne and solvent-borne versions to serve different needs and requirements. Contex topcoats have three different sheens: Matt, Silk, Semi-gloss.

Proven colours retention and

opacity properties

Excellent anti-carbonation properties

Strata

Ultimate protection for floors

Strata floor coating systems are designed to be long lasting and provide years of trouble-free service. Strata provides ultimate protection for concrete floors. Offering best-in-class abrasion resistance and mechanical strength, it has been developed to reduce the need for cyclical maintenance whilst offering high standards in sustainability.

Stadium terraces and other floors are required to be durable and resist external weathering and temperature variations, mechanical wear and abrasion and at the same time keep a high aesthetics appearance. Our Strata product range includes flooring for different areas in stadiums; flooring in spectator terraces, flooring in car parking areas and flooring in commercial areas.

| | Strata | Finish | About the product |
|--|------------------------|------------|--|
| | Strata Epoxy HT | High gloss | For areas with heavy traffic or very low maintenand Outstanding mechanical properties Excellent abrasion and chemical resistance Can be applied to a smooth glossy or slip-resistan Solvent-free epoxy and LEED compliant in VOC |
| | Strata Epoxy MT | Glossy | For areas with medium traffic High abrasion and chemical resistance Solvent-borne epoxy with high solid content |
| | Strata Epoxy LT | Glossy | For areas with light traffic Can be used on walls Solvent-borne epoxy |
| | Strata Epoxy SL2000 | High gloss | Self-levelling system Seamless and hygienic surface Excellent abrasion resistance Solvent-free epoxy and LEED compliant in VOC |
| | Strata Epoxy WB | Semi gloss | Waterborne epoxy coating for floors and walls VOC free and LEED compliant Can be used on damp surfaces For areas with light traffic |
| | Strata PU Top | Glossy | Outstanding UV resistance, colour and gloss reten Exterior and interior use Can be used as UV protective topcoat on epoxy flo |
| | | | |



Olympic Park and Train Station, Sochi, Russia Russian Railways created a modern transport infrastructure for the 2014 Winter Olympics in Sochi, including 12 mountain tunnels with a total length of 30 km, 71 bridges and flyovers totalling 38 km and the 48 km long Adler-Alpika combined road and rail connection.

Much of this network is protected by over 1 million litres of Hempel securing the appearance for many years to come.

Products

Hempadur Fast Dry 15560 Hempadur Mastic 45880 Hempathane 55610

Doha Golf Club, Doha, Qatar

Doha Golf Club boasts an 18 hole Championship Course, a 9 hole Academy Course, an enormous driving range and putting green, 8 artificial lakes, graceful landscaping and a beautiful clubhouse designed in old traditional Arabic style, which has been located at one of the highest points on the course giving it a magnificent prominence.

Products

Topaz Emulsions 588ME/589ME Contex EM 58600

S.L.B Luz Stadium, Lisbon, Portugal The stadium features a translucent, polycarbonate roof which is supported by tie-beams of four steel arches, each measuring 43 metres in height. The capacity of 65,647 seats is used for football matches among other sporting events. Hempel has been used on this stadium to protect the steel work in the roof.

Products Hempadur Zinc 17360 Hempadur Fast Dry 15560







Selected references

| Project | Location | Products | Year |
|---|---------------------|--|------|
| F1 Grand Prix | Bahrain | Topaz emulsions 588ME/589ME | 2016 |
| Sabah Al Salem Sports Hall | Kuwait, Middle East | Casa Stone Tex 582ME, Topaz emulsions 588ME | 2015 |
| Vigo AVE Railway Station | Vigo, Spain | Hempacore One 43600 | 2015 |
| Torun Sports Stadium | Poland | Hempacore One 43600, Hempadur Fast Dry 17410 | 2014 |
| Fisht Olympic Stadium | Sochi, Russia | Hempadur Fast Dry 15560, Hempathane HS 55610, Hempadur Mastic 45880 | 2014 |
| Itaipava Arena | Fonte Nova, Brazil | Hempadur Zinc 17360, Hempathane HS 55610, Hempadur Fast Dry 15560 | 2014 |
| FIFA Worldcup Stadium Arena Castelão | Brazil | Hempadur Zinc 17360, Hempathane HS 55610, Hempadur Fast Dry 15560 | 2012 |
| FIFA Worldcup Stadium Arena de Gremio | Brazil | Hempadur Zinc 17360, Hempathane HS 55610, Hempadur Fast Dry 15560 | 2012 |
| Al Shaqab Academy | Doha, Qatar | Topaz emulsions 588ME | 2012 |
| FIFA Worldcup Stadium Arena Fonte Nova | Brazil | Hempadur Fast Dry 15560, Hempathane HS 55610, Hempadur Zinc 17360 | 2011 |
| Sanmenxia Culture & Sports Centre | China | Hempadur Fast Dry 17410, Hempadur Hi Build 45230, Hempaxane Classic 55000 | 2011 |

About Hempel

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 employs 6,700 people in 80 countries and has 28 factories, 15 R&D centres and more than 150 stock points worldwide.

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.

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