



# Chartek 2218E

Engineered for speed. Trusted for protection.





Through decades of innovation, development and refinement, our industry-leading Chartek® PFP range from International® has been tried and tested in the harshest conditions around the world.

Our deep understanding of the passive fire protection needs of energy assets combined with our product development and testing expertise ensures we deliver focused solutions that meet the needs of asset owners and applicators.

**Matthew O’Keeffe,**  
**Protective Coatings Global Segment Manager**

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# Comprehensive solutions



## One partner for all your coating needs

International® supplies expertise, protective coatings, and innovative solutions for complex, high-cost, multi-stakeholder projects across industries – from energy, infrastructure, and mining to the energy transition sectors.

We're equipped to help customers navigate this landscape from a coatings perspective and provide a tailored approach that adds value across the entire chain – from specification to application.

Our International® product range offers a comprehensive solution for all your project coating and fire protection needs, ensuring seamless integration and reliable performance for both steel and concrete infrastructure.

By providing a full range of advanced protective coatings under one roof, we eliminate the need for multiple suppliers – simplifying your supply chain while delivering quality, consistency, and confidence across all applications.

As your dedicated partner, we're committed to exceptional protection, enhancing the longevity and safety of your assets while streamlining your project management.

### Self reinforced pool and jet fire solution



#### Chartek ONE

Up to 59% reduction in workshop hours when using Chartek ONE\*

Certified to meet the industry's highest standards, including NORSOK M-501:2022 (Edition 7), Chartek ONE simplifies application to a single coat mesh-free solution even for 60 minutes high heat flux jet fire scenarios. Chartek ONE's 100% solids, boron-free formula helps improve HSE performance and footprint.

### Super efficient pool fire solution



#### Chartek 2218E

Up to 50% fewer application hours in the workshop when using Chartek 2218E

Chartek 2218E is a high-performance, boron-free epoxy PFP system delivering efficient hydrocarbon pool fire protection. Certified for structural fire protection on carbon steel and tested against ANSI UL1709, BS476-20/21 (Part 20 Appendix D), EN1363-2, ISO 22899-1, and UL2431, it offers simplified one-coat application with rapid curing – even at low shop temperatures. The result: more steel coated in less time and faster throughput in the workshop.

### Process specialist solution



#### Chartek 1709

Millions of square meters covered over a 15 year period

Chartek 1709 adds unique capabilities to our ANSI/UL 1709 listed product offer to give you an unrivalled choice. Having covered millions of square meters over a period of 15 years, Chartek 1709 is able to withstand high process temperatures without the use of auxiliary insulation, and can be used with confidence for a wide range of applications and fire scenarios, including pool fires up to 4 hours, jet fires, and vessel protection. Its low installed weight and excellent application properties make it the ideal choice for modular construction or site application.

### Cryogenic specialist solution



#### Chartek 1960CSP

Combined hydrocarbon fire protection & insulation against cryogenic liquid exposure

Chartek 1960CSP is a unique intumescent material that provides combined hydrocarbon fire protection and insulation against cryogenic liquid exposure. A high build, solvent free, two pack epoxy material, Chartek 1960CSP also provides excellent corrosion protection and blast resistance.

\*Based upon 60-minute jet fire scenario with a representative steel size for offshore oil and gas assets.

# Supporting customers globally

With Chartek®, you get more than just a product; you get a partner with a celebrated history and a commitment to excellence. Our extensive portfolio and innovative R&D efforts ensure that we meet and exceed our customers’ expectations.

**Andrew Holt,**  
**Protective Coatings Business**  
**Development Manager, EMEA**

At AkzoNobel, we’re proud to provide unrivaled international corrosion and coatings expertise. With over 3,000 R&D professionals worldwide, 2,800+ patents/patent applications and 70 laboratories we’re ready to support your projects across the globe.

Our NACE and FROSIO accredited Technical Service Representatives (TSR) offer a globally supported, complete technical services program tailored to your project requirements giving us the ability to co-ordinate and project manage worldwide. This ensures consistency, high quality and technical competency.

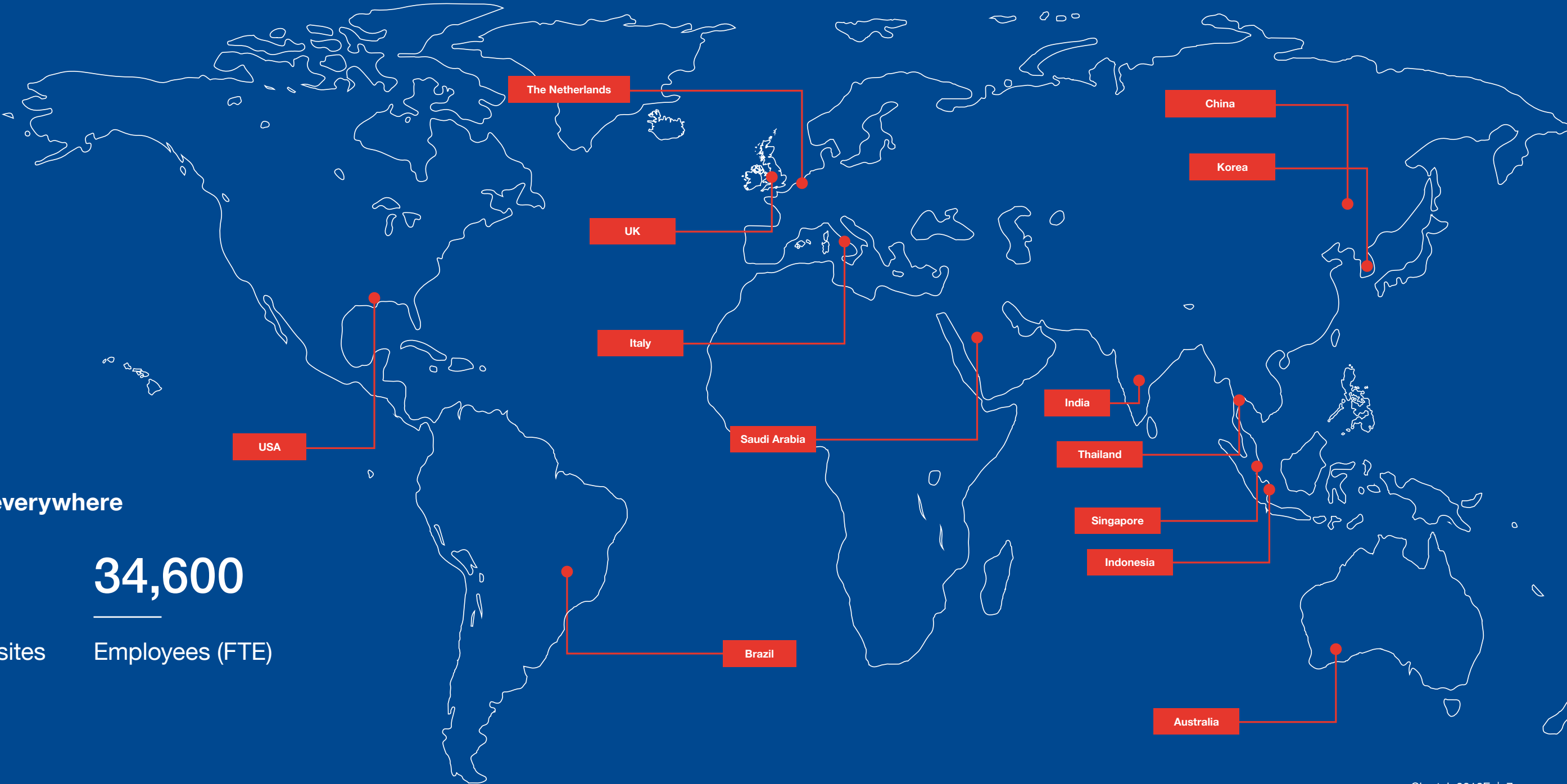
You’ll find us everywhere

~130

Manufacturing sites

34,600

Employees (FTE)





# Smarter solutions for a sustainable future

## A recognized sustainability leader

As part of AkzoNobel, we are committed to developing pioneering paints and coatings today that help safeguard our world tomorrow.



Only paints and coatings company **AAA in MSCI**



**Top 1% of all companies assessed by EcoVadis**



Only paints and coatings company **ESG industry top rated by Sustainalytics**



Image Credit: Smithsonian

## Exploring new frontiers

International® PFP coatings excel in the harshest conditions, tested to global standards including high heat flux jet fire, cryogenic exposure, and vessel applications. Our specialist, safety-critical coatings are engineered to last the lifetime of your asset, delivering peak performance.

Built on the heat shield technology developed for NASA's Apollo space program, Chartek® has over 50 years of trusted expertise – continuously innovating to meet your most demanding project requirements.

Originally designed to withstand atmospheric re-entry, the technology provided up to 4 hours of fire protection and maintained steel integrity by preventing strength loss above 260 °C / 500 °F.

**2,760 °C**

Resisted re-entry temperatures up to 2,760 °C / 5,000 °F

**21 °C**

Cabin stayed at a safe 21 °C / 70 °F



# Chartek 2218E

In downstream oil and gas construction, efficient production is everything – and safety is non-negotiable. Backed by over 50 years of Chartek® heritage, Chartek 2218E sets a new benchmark in onshore hydrocarbon pool fire protection with a 2-hour rating achieved in a single coat application over Charlok® mesh.

### Benefits at a glance

Engineered for shop-applied steel, this patented, boron-free epoxy intumescent delivers the industry’s lowest UL1709-certified thickness and weight for W10x49 steel. With up to 50% less application hours and up to 25% less material use – it transforms how fabricators and applicators approach structural fire protection.

The result? Faster throughput, reduced energy use, simpler application, and up to 25% total savings on applied costs. Chartek 2218E helps you move more steel, faster – while meeting today’s highest safety and environmental standards.

**Never compromise.**

50%

Up to 50% fewer workshop hours\*

1 coat

One coat application over mesh (to achieve 5.7 mm)

25%

Up to 25% savings on applied costs

25%

Up to 25% less material used (less energy consumption and waste)

\*Based upon a 2 hour pool fire scenario considering a W10x49 steel section.

# Application

## Maximum efficiency in a single coat

Unlike alternative PFP systems, which require product to be applied first, mesh embedded at mid-depth, and then overcoated, Charlok® reinforcing mesh is clipped directly onto the steel before application. Chartek® 2218E is then applied in a single coat to 5.7mm – delivering the industry’s lowest certified thickness and weight. The correct thickness is achieved in one pass, saving up to 50% workshop hours and up to 25% material use, boosting productivity without compromise on safety or performance.

### Primer

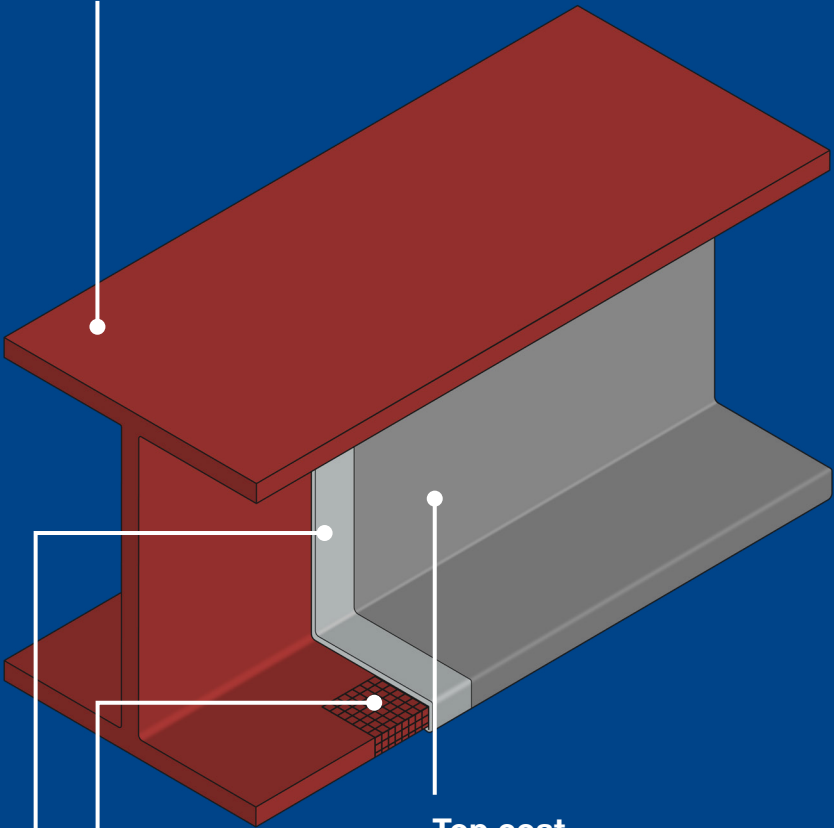
Chartek 2218E has been tested and designed to work with a range of primers for optimum performance and durability.

### Approved primers for use with Chartek 2218E

- Intergard 251HS
- Intergard 269
- Intergard 7500
- Intershield 300
- Intershield 4000USP
- Interzinc 52E / Intergard 269

### Recommended topcoats for use with Chartek 2218E

- Interthane 990 series
- Interfine 2080HS



### Top coat

Can be applied if specified. Topcoats are recommended in all external applications.

### Charlok mesh

6" width applied prior to the application of Chartek 2218E to inner and outer edges of the flange toes.

### Chartek 2218E

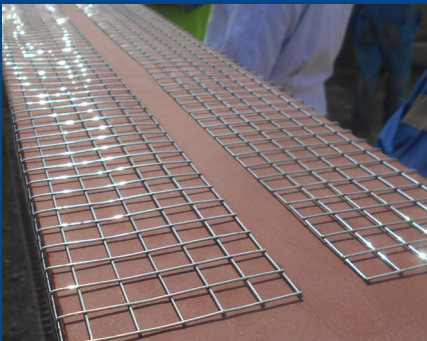
A high build, two pack material providing excellent durability and combined corrosion and hydrocarbon pool fire protection.



# Boosted productivity

## Increased efficiency for in-shop applications

Chartek® 2218E boosts productivity and accelerates workshop throughput. Applied as a single coat over Charlok® mesh, it's designed to keep projects moving smoothly, even in lower shop temperatures, so you can easily meet tight deadlines and maximize shop utilization.



50%

Up to 50% fewer application hours

25%

Up to 25% less material use

# Streamlined costs

## Delivering more value on every project

With lower film thickness and increased workshop productivity, Chartek 2218E enables up to 25% in total shop applied costs savings. These are driven by faster application and up to 50% lower direct labor costs. Combined with reduced material use, energy savings, and lower ownership costs across the lifecycle, it all adds up to smarter project value.



# Unrivalled weight, thickness, and durability

## The industry's lightest and thinnest PFP solution

Chartek® 2218E delivers the industry's lowest certified film thickness for 2-hour pool fire protection, using up to 25% less material than competing products. It achieves the lowest applied UL 1709-certified thickness and weight for W10x49 steel – reducing steel load, simplifying handling, and easing logistics – all while maintaining robust durability. It's the ideal epoxy intumescent for shop-applied steel construction.



# Advanced safety and compliance

## Designed for today's regulations, preparing for what's ahead

Chartek 2218E is engineered to meet current industry standards and tomorrow's evolving environmental requirements. Its boron-free formulation and reduced material usage support an improved application experience, generating less waste, using less energy, and ensuring durable protection.

### Benefits at a glance



**Boron-free:** Improved HSE profile for applicators and the environment.



**Enhanced durability:** Complies with UL2431 requirements for superior performance.



**Sustainable use:** Reduced material consumption lowers energy use and waste disposal.



# Robust handling and constructability

Faster in the workshop and through to site, with performance you can trust

Our unique curing agent delivers compression resilience, enabling safe stacking and boosting workshop throughput.

## Robust handling UL 1709

Single coat application allows fast handling times with coated steel able to be moved the next day even when shop temperatures are low.

Proven durability under environmental weathering standards, with no prescribed topcoat needed, offering full topcoat flexibility with trusted fire performance.

## ASTM D5894

Chartek® 2218E coating systems tested with universal primer show scribe creep equivalent to zinc epoxy primed systems, demonstrating the highest level of corrosion performance.

## Charlok mesh reinforcement

The use of Charlok® mesh reinforcement significantly improves damage resistance on flange edges, with good compression resistance for stacking and transport.



Chartek® offers the world’s most complete range of epoxy intumescent passive fire protection (PFP) coatings. And because we know that every project is unique, the International® team of experts supports owners, EPCs and applicators in meeting their most complex and specific needs with the most appropriate, simplest solutions.

Never compromise.  
Chartek.





### About International®

International® is a world leader in high-performance marine, protective, and yacht coatings. Onshore and off, International® delivers complete solutions backed by expert service, global support and over 140 years of heritage in innovation and partnership – spanning anticorrosion, passive fire protection, and advanced fouling control to premium aesthetic finishes. International® coatings cover everything from the world's tallest and most sustainable buildings to supertankers and megayachts. International® is a brand of the Marine, Protective and Yacht Coatings business unit of AkzoNobel.

**For more information,  
please scan the QR code:**



### About AkzoNobel

Since 1792, we've been supplying the innovative paints and coatings that help to color people's lives and protect what matters most. Our world class portfolio of brands – including International®, Sikkens and Interpon – is trusted by customers around the globe. We're active in more than 150 countries and use our expertise to sustain and enhance everyday life. Because we believe every surface is an opportunity. It's what you'd expect from a pioneering and long-established paints company that's dedicated to providing sustainable solutions and preserving the best of what we have today – while creating an even better tomorrow. Let's paint the future together.

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please scan the QR code:**



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The International logo features a red stylized flower icon to the left of the word "International" in a bold, blue, sans-serif font.

**AkzoNobel**