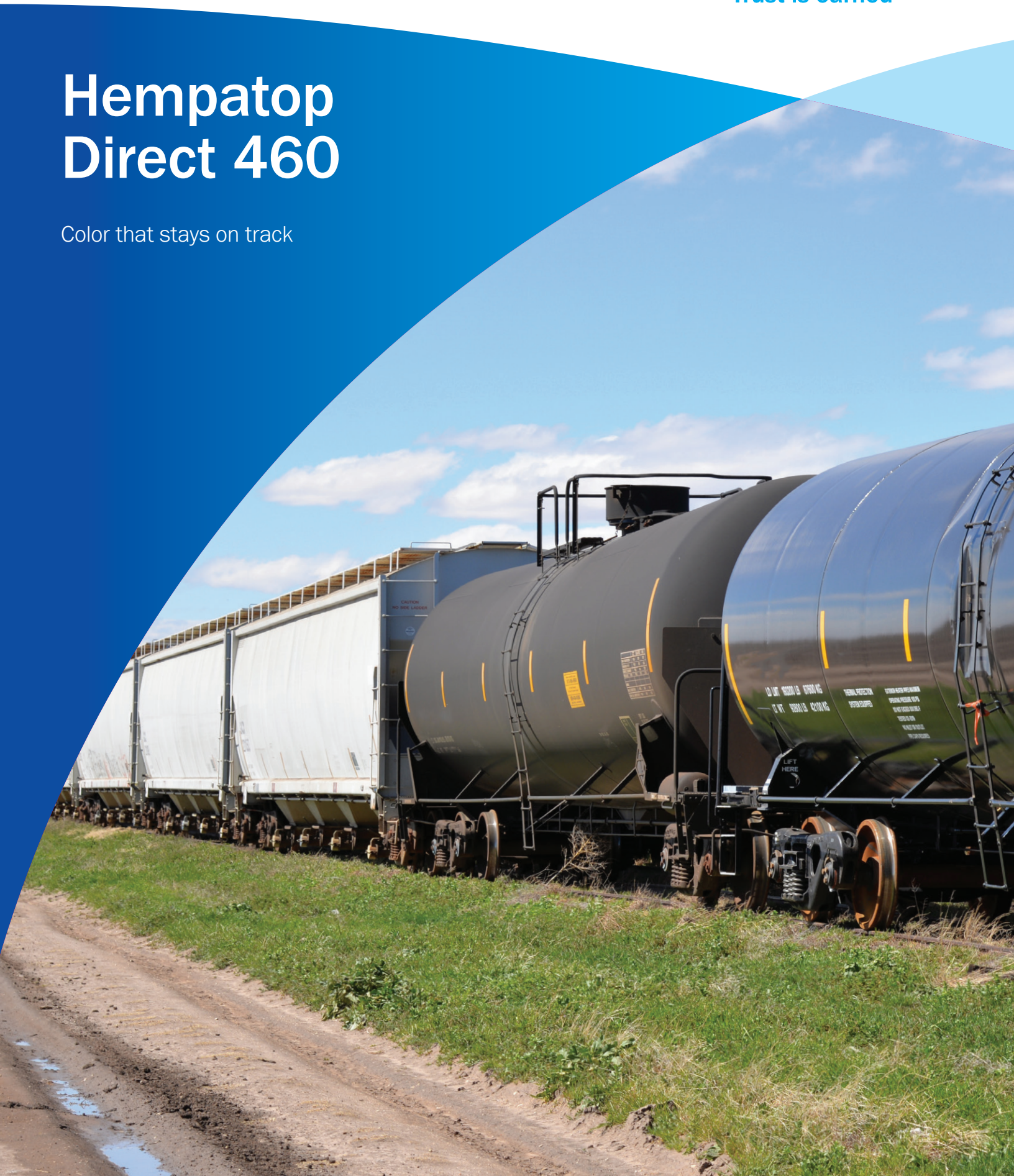


# Hempatop Direct 460

Color that stays on track





# A new generation of protection for railcars

Our railways are a fundamental part of our infrastructure. Moving goods by rail is essential to our economy and growth.

Over 655,000\* rail cars traverse North America, working in tough conditions; from the sub-zero temperatures in Alaska to the tropical climate of Mexico. They carry a huge variety of cargoes from hazardous chemicals and gases to food grade products. Protecting these assets from UV exposure, harsh weather and chemical spills requires a special kind of coating.

At Hempel we have vast knowledge and experience in the Rail industry with an extensive track record with some of the world's leading railcar owners and operators. Our innovative coating solutions are proven in the field and supported by our renowned technical service teams.

\*Statista 2018 – tank, hopper and box cars

## Hempatop Direct 460 product profile

### Next generation high solids, two-component, polyamide cured epoxy coating

Colors	Black/19990, Standard Grey/17700, Light Grey/11150, White/10000
VOC	1.94 lbs/US gallon (232.5 g/L)
Volume solids, %	76 ± 1
Mixing ratio	1:1
Coverage	305 sq.ft/US gallon (7.5 m <sup>2</sup> /L) 100 micron/4 mils
Dry to touch	3 hours at 68°F/20°C



## Resilient good looks

Meeting our customers' demands for ever more robust coatings, we have developed high performance Hempatop Direct 460.

This advanced formula uses the very latest coating technology and uniquely, chalks to original coating color, keeping your railcar assets looking their best for longer.

Chalks to original color for extended aesthetics

Excellent UV and chemical resistance

Holds high gloss for longer



Gloss comparison at 542 QUV hours



Hempatop Direct 460



Competitor

### The results

A resilient, high gloss coating that gives you the best performance in the most challenging conditions with an enhanced appearance that is proven to last.

Internal test	Result
Adhesion	1180 PSI / 8 MPa
Flexibility	No cracking after bending over a 88,5 fixed radius mandrel giving a Flexure strain (elongation) of approximately 2,0%
Corrosion resistance	No blisters Exposure: 2056 hours Rust creep from scribe of less than 4 mm
Solvent Resistance (ASTM D5402)	Resistant to MEK more than 200 double rubs

## Applies with ease

Drying to a high-gloss finish, Hempatop Direct 460 is engineered for use direct-to-metal. For interior use on box cars and exterior use on box, tank and hopper cars.

With improved application properties at higher DFTs, with reduced sagging, it is easy to apply and dries to a smooth finish. With faster drying times it speeds the production process and boosts productivity.

Owners and applicators alike realize genuine efficiencies with tangible benefits in time savings.

**Ask your Hempel representative for more information today.**

### 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 factories, R&D centers 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 colorful. 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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