

DOES YOUR CUSTOMER NEED ADVANCED CORROSION PROTECTION?

Salts, fertilizers and chemicals can neutralize the effectiveness of standard industrial coating systems. However, durable corrosion protection can be achieved for truck scale understructures in extremely corrosive environments.

HERE IS THE ANSWER

Use a chemically resistant, single component coal tar coating. Coal tar coatings are specifically designed and used for long-term adhesion and corrosion protection. To prevent corrosion and failure of steel in environments where corrosive and caustic materials are present, a robust coating is an excellent method of maximizing lifespan.

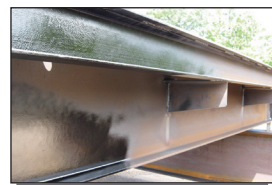
Coal tar coatings are a common technology used today in applications such as maritime equipment, chemical tank linings and underground pipelines – all extremely corrosive environments.



The performance coal tar products deliver is proven and well-suited for heavy capacity truck scale environments as well.

To maximize protection from aggressive environments, Thurman truck scales receive a high solids, single component coal tar coating applied to a high 12 mil. dry film thickness.

In contrast to a single component coal tar, some manufacturers offer asphalt emulsions. However, asphalt emulsions are cut with water and mechanically emulsified into a thinner, water-based substance not well suited to rugged environments. An emulsion is a mixture of two immiscible fluids, such as oil and water. Two substances that will not mix naturally can be made to mix in an emulsion with the addition of chemical additives. That's what an asphalt emulsion is — a water based mixture held together by chemical surfactants. Over time, a very short period



of time, that mixture breaks down and the properties change, leading to scaling and ultimately a failure. Once this failure occurs, your steel substrate is at the same degree of risk for corrosion as if there were no coating at all.

The dry film build is critical when comparing products. Thurman Scale's coal tar product is a thick, viscous single component coating that naturally dries to a high film build. Conversely, typical asphalt emulsions are thin because they are water-based. In fact, minimum DFT for coal tar is recommended at 12 mils thick. The same volume in water-based emulsions results in only 83% of that build at 10 mils.



Thurman Scale is so satisfied that factory-applied coal tar coatings represent the best solution in the market for corrosion resistance that we provide standard warranty coverage. Field-applied asphalt emulsions are not warrantied.

	Coal Tar Undercoat	Asphalt Emulsion
High solids	Yes	No (water-based emulsion)
Single component	Yes	No (water-based with surfactants)
Dry film thickness	12 mils DFT	10 mils typical
Water-based	No	Yes
Warranty	Yes	No
Steel preparation	Yes - SP6	None recommended
Special application equipment	Yes	Unknown
Special handling	Yes	Unknown

In a side-by-side comparison, coal tar coating shows numerous advantages over asphalt emulsion.

In addition to the tendency of the emulsion to fail, there is no recommended steel preparation method for adhesion. Adhesion is key for any coating to perform. The absence of steel preparation prevents proper adhesion and promotes the ultimate failure of the emulsion in the short-term.

Coal tar is a unique product and has superior advantages over the performance of asphalt emulsions. Careful consideration of these concepts is necessary to really "compare" the overall product and performance.

MACRO-EMULSION INSTABILITY

“Macro-emulsions are inherently unstable. Over a period of time, the asphalt phase will eventually separate from the water. Asphalt is insolvable in water.”

Transportation Research Board
of the National Academies,
Transportation Research Circular E-C102,
“Asphalt Emulsion Technology.”