



SINCE 1848

RUST NEVER SLEEPS. THAT'S WHY KNAPHEIDE DEVELOPED E-COAT

It's true—rust never sleeps. It doesn't even rest for a minute.

Because rust is constantly looking for steel to consume, anything made of steel carries the risk of corrosion.

When you buy quality Knapheide products, rust shouldn't be a worry. To provide the best protection against rust, we installed e-coat, our state-of-the-art, custom-designed electrocoating prime paint system, in our plant at 1848 Westphalia Strasse.

E-coat is equivalent to all the e-coat systems used by the major auto and truck manufacturers.

Because it bonds paint to steel by an electroplating process, any e-coat system gives you better corrosion protection than spraying. E-coat systems get prime paint everywhere in a product—including places that are impossible to reach using even the best spray techniques—and is absolutely consistent in thickness. Salt spray tests show that e-coating is far superior to spraying paint for inhibiting corrosion.

But Knapheide's exclusive e-coat is not just any e-coat system. Our e-coat is simply the best e-coat system in the truck equipment industry today.

To learn more about e-coat and what it means for your quality Knapheide products, take a look inside.

12 STEPS TO E-COAT PROTECTION

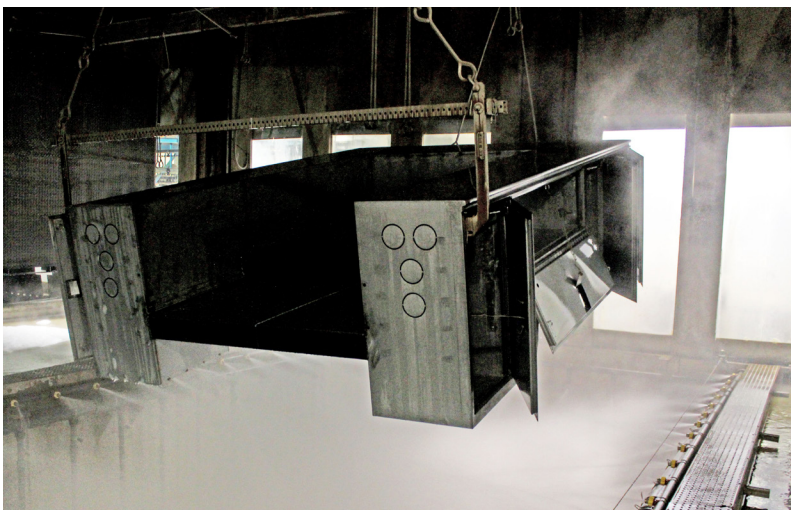
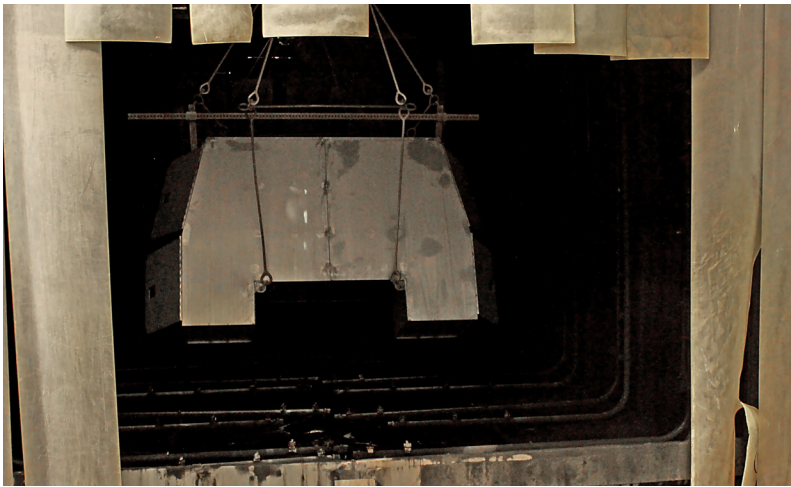
STEPS 1 - 4: CLEANING

We can't just dunk a Knapheide product into the electrocoating tank and expect acceptable results. Cleaning and pretreatment are vital to the bonding of paint to steel, so e-coat begins with four cleaning steps and four pretreatment steps.

Spraying provides the most effective cleaning and rinsing capabilities, but spraying can't reach into recessed or hidden surfaces of complex assemblies; it won't get into every nook and cranny. Immersion, or dipping, helps the cleaning solution reach all surfaces. That's why our e-coat system includes both spray and immersion alkaline cleaning, along with spray and immersion rinsing.

Cleaning steps are:

- Step 1—Alkaline cleaner spray
- Step 2—Alkaline cleaner immersion
- Step 3—Fresh water rinse spray
- Step 4—Rinse conditioner immersion



STEPS 5 - 8: PRETREATMENT

K-Coat's pretreatment steps begin with a zinc phosphate bath which improves paint adhesion and increases corrosion resistance. The coating applied by this immersion also increases resistance to humidity and water soaking. Immersion in a chrome-free rinse seals the zinc phosphate coat to further improve paint adhesion and corrosion resistance.

Pretreatment steps are:

- Step 5—Zinc phosphate immersion
- Step 6—Fresh water immersion
- Step 7—Chrome-free sealer immersion
- Step 8—Deionized water immersion

STEPS 9 - 12: ELECTROCOATING AND RINSE



K-Coat applies prime paint by immersing the product in a bath that's 80 percent deionized water and 20 percent paint solids. Once the body is in the bath, K-Coat turns on 450 volts at 800 amps for three minutes.

A number of anodes, which have a positive charge, cover the inside of the electrocoat tank, and the service body serves as the ground to complete the electrical circuit. The electric current carries the paint solids to the steel surface and fuses them to it.

The prime-painted service body then goes into three rinse steps to remove any paint that has not electrically bonded to the steel. If it wasn't removed, unbonded paint would cause a rough finish.

Electrocoating and rinse steps are:

Step 9—Electrodeposition epoxy primer immersion

Step 10—Deionized water immersion rinse

Step 11—Deionized water spray rinse

Step 12—Deionized water immersion rinse



CURING

Once the product has completed all 12 steps in the K-Coat process, it is baked at 340° for 42 minutes in an overhead oven to cure the prime paint. The product then cools down for 32 minutes.

As one part emerges from the oven and cool-down area, another begins the journey to K-Coat protection.



WHAT DOES E-COAT MEAN TO YOU?

SUPERIOR CORROSION PROTECTION ON THE SURFACE OF THE STEEL PROVIDED BY CLEANING AND PRETREATING.

SUPERIOR ADHESION OF PRIME PAINT COAT PROVIDED BY E-COAT SYSTEM ELECTRICALLY BONDING PAINT TO STEEL.

UNMATCHED CONSISTENCY OF PRIME PAINT THICKNESS ON ALL SURFACES.

SUPERIOR PRIME PAINT COVERAGE THROUGHOUT COMPLEX ASSEMBLIES SUCH AS SERVICE BODIES PROVIDED BY IMMERSION IN PRIME PAINT BATH.

Before installing e-coat, Knapheide searched for the best in state-of-the-art epoxy prime paint and electrocoating treatment chemicals. We selected PPG products, which provide the following performance:

Property	Performance
Pencil Hardness	2H Minimum
Direct Impact Pass	120 in/lbs
Reverse Impact Pass	120 in/lbs
Cross-Hatch Adhesion	No Failure
Humidity	1000 hrs minimum
Salt Spray	1000+ hrs MIL-STD-1223AB
Gravelometer	6 minimum
GM Scab Test	20 cycles minimum

E-coat results in a prime coat that provides excellent chemical and solvent resistance. Our e-coat system is the best electrocoat prime paint system in the industry. Because rust never sleeps. And because you should never worry about the quality of your Knapheide product.

The Knapheide Manufacturing Company
1848 Westphalia Strasse
Quincy, Illinois 62305

(217) 222-7131

www.knapheide.com

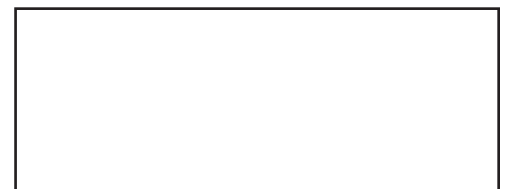
knapheide@knapheide.com

RUST NEVER SLEEPS



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For more information:



Specifications subject to change without notice.
Some models shown with optional equipment.