

**AkzoNobel**

# Coil Coatings

Warranty Management  
North America

# Passion for paint

A global paints and coatings company

**AkzoNobel**



# Setting the standard in color and protection since 1792

**AkzoNobel**

Active in 150 countries and employe around 34,500 professionals. Our activities are organized into five main businesses:

## Decorative Paints

- ↗ Exterior
- ↗ Interior
- ↗ Flooring
- ↗ Pre-deco

## Marine and Protective Coatings

- ↗ Marine Coatings
- ↗ Protective Coatings
- ↗ Yacht Coatings

## Automotive and Specialty Coatings

- ↗ Vehicle Refinishes
- ↗ Aerospace Coatings
- ↗ Automotive OEM
- ↗ Consumer Electronics

## Industrial Coatings

- ↗ Coil & Extrusion and Packaging Coatings
- ↗ Wood Coatings

## Powder Coatings

- ↗ Architectural
- ↗ Auto
- ↗ I&C
- ↗ Functional
- ↗ GTC

## Key brands:



# Metal Coating Facilities – At a Glance

**Serving North America with a flexible supply chain:**

- ☐ Metal coatings ship from several locations.
- ☐ Regional footprint.
- ☐ Local service.
- ☐ Flexibility of production.

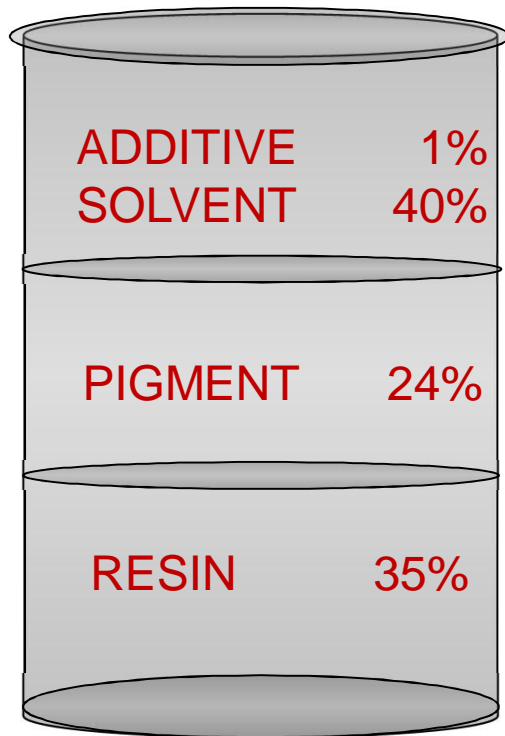


# Where Coil Coatings are Applied.

From monumental buildings to trusted residential structures. In the city. And in the country.

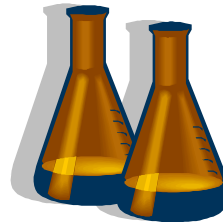


# Components of Paint



Viscosity and  
Surface Properties

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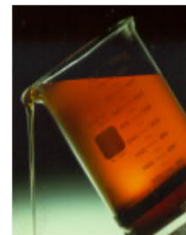


Color

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Backbone of Paint



# Common Resins



**Polyvinylidene Fluoride**, or **PVDF** is a highly non-reactive and pure thermoplastic fluoropolymer. PVDF is a component of the coating, not the coating itself. While many suppliers offer versions of PVDF with varying performance attributes, PVDFs typically offer the following:

- + Superior color and gloss retention
- Lower resistance to scratching



**Silicone Modified Polyester**, or **SMP**, utilizes a combination of polymerized silicone. SMPs lead the market in volume and typically offer the following:

- + Excellent color and gloss retention
- + Superior toughness and hardness at all temperatures
- + Excellent resistance to atmospheric staining and dirt pick up



**Polyester** systems are an older, established technology, yet still work well in targeted applications.

- Limited exterior performance



# Pigments

**Organic Pigments** - Comprising a class of pigments that may have good, but usually not ultimate, durability. Organic pigments are more susceptible to fading over time, and generally cost less.

**Inorganic Pigments** - Synthetic or naturally occurring which do not contain carbon compounds. Majority provide excellent long-term performance. Higher performance comes at a higher cost.

**Ceramic Pigments** - Complex inorganic pigments are made from mixed metal oxides synthesized at molten metal temperatures. They are the most color stable pigments available today, offering unparalleled resistance to heat, light and chemical attack. Ideal for use in the highest quality exterior coatings to assure long-term color retention even after decades of weathering. Higher cost associated with higher performance.



# Many Choices. Varied Results.

There are many paint systems. And each provides different performance characteristics based on the system and components. But all paint warranty claims are limited to these three criteria:

- 1. Film Integrity**
- 2. Color Retention**
- 3. Chalk Resistance**



# Quality Paint Requires Thorough Prep.

**Each step is important for a Warranty:**

## Choice of Substrate (Base Metal)

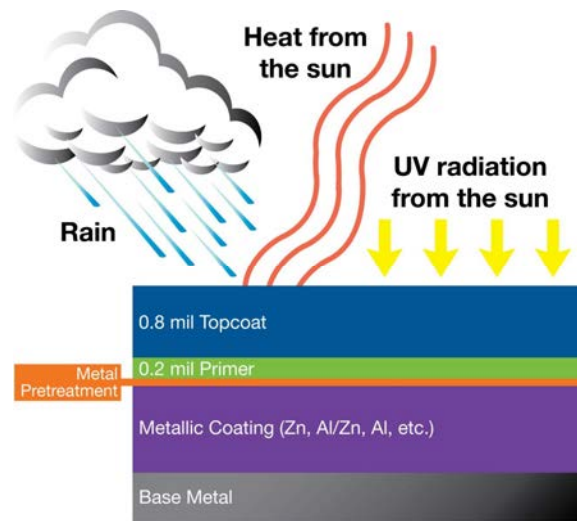
- ☐ Aluminum – Resistant to corrosion in most instances
- ☐ Steel – Susceptible to corrosion but can be protected with coating

## Prep of Substrate

- ☐ Proper cleaning and pretreatment
- ☐ Improves adhesion of the paint system to the substrate
- ☐ Establishes weathering performance

## Consistent Coating Systems and Processes

- ☐ Contributes to the corrosion resistant and performance properties
- ☐ A quality system will enhance results



## What's Warrantable - Film Integrity

A quality coating system will maintain **Film Integrity** over the life of the structure.

- ☐ Ensures paint will maintain adhesion to substrate
- ☐ Will not peel, flake or otherwise lose adhesion
- ☐ Reported in time (years)

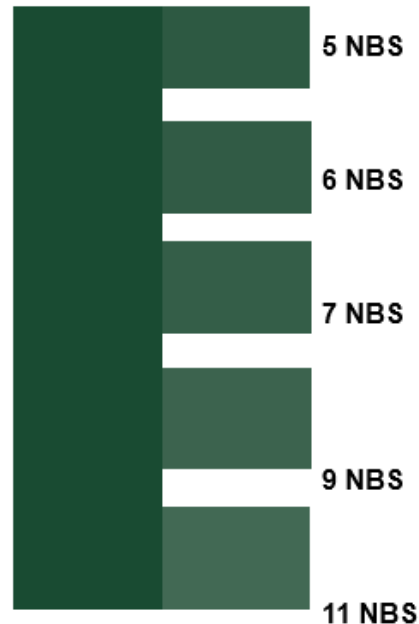


## What's Warrantable – Color Retention

A quality coating system will maintain **Color Retention** over the life of the structure.

- ❑ Signifies the maximum change in color (fade)
- ❑ Reported as Delta E Hunter units. Lower number is best
- ❑ Fade results from chemical breakdown of a coating's base resins and pigments, which appear as a visible loss of color.

Fade Comparison



# What's Warrantable – Color Retention

## Washed vs. Unwashed Panels

Apparent discoloration of the paint may occur when it has been exposed in dirt-laden atmospheres for long periods of time.

A good cleaning will generally restore the appearance of these coatings.

Example of Canopy by AkzoNobel app with weathering samples.



## Warrantable Performance – Chalk Resistance

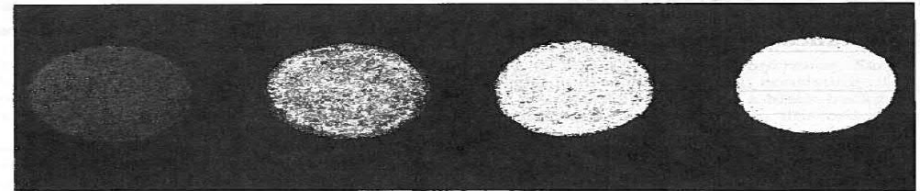
A quality coating system will maintain **Chalk Resistance** over the life of the structure.

- ☐ Residue resulting from decomposition of the paint films caused by ultra violet rays, moisture or heat (or any combination of the three).
- ☐ Visual ratings in according to ASTM D659
- ☐ Ratings from 10 – 0; where 10 is best
- ☐ Measured by rubbing the coated surface with a soft fabric and calculating the amount of powder that is picked up.

# Warrantable Performance – Chalk Resistance

- ❑ Visual ratings in according to ASTM D659
- ❑ Ratings from 10 – 0; where 10 is best

PAINT PERFORMANCE MEASUREMENT											
Chalk Rating											
Best											Worst
10	8	6	4	2							0
Color-NBS Units											
Best											Worst
1	2	3	4	5	6	7	8	9	10		∞
Film integrity: Will not chip, crack or peel for duration of warranty											



No. 8

No. 6

No. 4

No. 2

# What's NOT Covered.

## Common non-warrantable situations:

- ☐ Substrate corrosion, including failure or damage from under-film or edge corrosion
- ☐ Coatings not applied in accordance good install practices
- ☐ Breaches in the coating film caused by installation scratches, abrasions or hard impact
- ☐ Damage caused by moisture entrapment (between bundles or during transit)
- ☐ Mixing of different paint systems
- ☐ Unapproved chemicals or cleaners
- ☐ Where materials or items are permanently attached or adhere to the coating

Let's take a closer look at a few key non-warrantable examples.

## Confinement Facility



# Installation Issues



## Stacked Panel Hole Drilling



## Wet Stack Storage Result



## Use of Inferior Air Dry Touch Up Paint



## Substrate Issues

Uneven Zinc distribution.



## The Fine Print.

### **Warranties are not always a reliable indicator.**

*Be wary of performance claims. Sometimes, they are just that, a claim.*

Ask how the metal substrate, pretreatment, primer, topcoat and processes are all utilized to provide a level of consistency that sustains performance for decades.



## For More Details.

AkzoNobel - [www.akzonobel.com/ccna](http://www.akzonobel.com/ccna)

National Coil Coaters Association - <https://www.coilcoating.org/>



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