



AIA PRESENTATION

A Review of Metal Panel Warranties – SSRWTW2 1 LU/HSW Hour



Metal Roof and Wall Systems

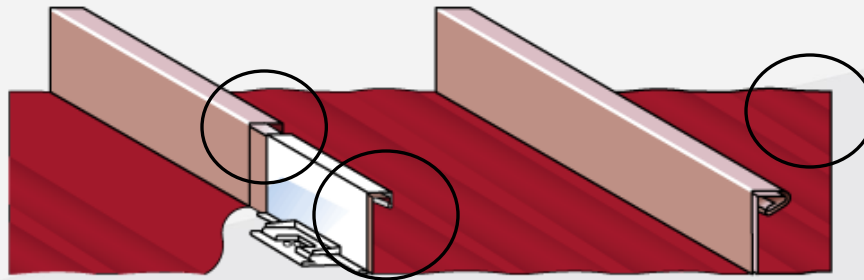
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Learning Objectives

- ❖ Develop an understanding of metal panel Galvalume and paint warranties and the variances within the industry
- ❖ Understand the differences in industry weathertightness warranties.
- ❖ Recognize roles of accountability in order to endorse weathertightness warranties
- ❖ Discern the best weathertightness warranty for a specific project

Three Types of Warranties

- ❖ Galvalume® Substrate
- ❖ Paint
- ❖ Weathertightness



GALVALUME[®] WARRANTIES



What is Galvalume[®]?

- ❖ Composition By Weight
 - 55% aluminum
 - 43.4% zinc
 - 1.6% silicon
- ❖ Specified per ASTM A 792
- ❖ Typical coating weights
 - AZ 50 for painted panels
 - AZ 55 for bare panels
- ❖ Appearance
 - Uniform spangle of unpainted Galvalume[®] cannot be guaranteed. When uniform appearance is critical, use prepainted Galvalume[®].

- ❖ Galvalume® is generally superior to galvanized in most applications, with the exception of animal confinement.



- ❖ Galvalume Plus® offers the following advantages:
 - Can be roll formed dry
 - Resists fingerprints and smudging
 - Resists storage stain and transit abrasion
 - Provides a bright appearance
- ❖ Minimum 20-year warranty

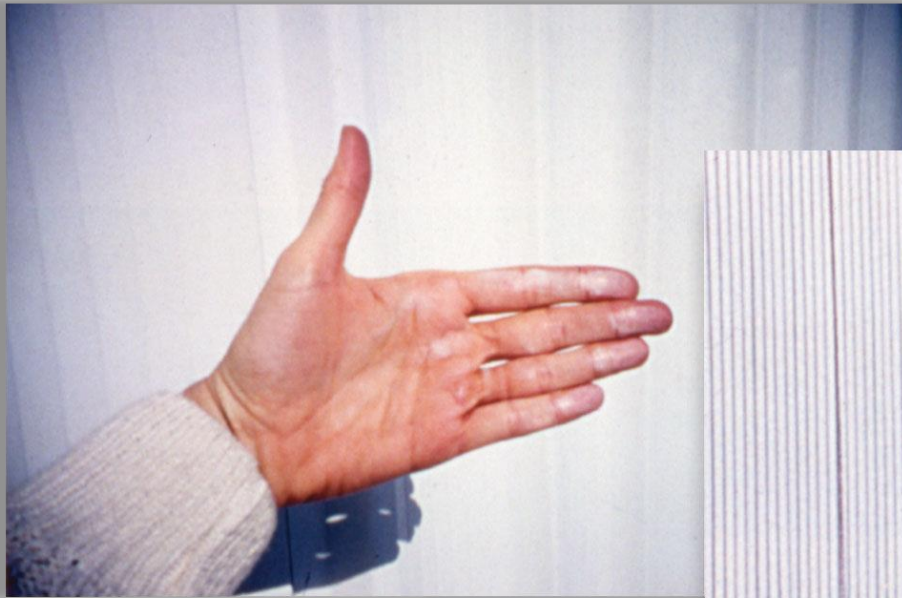
PAINT WARRANTIES



- ❖ The two most common types of paints used in metal roof and wall applications are:
 - Silicone Modified Polyester (SMP)
 - Fluoropolymers (PVDF)

Fundamentals of a Paint Warranty-Chalk

- ❖ Failure in the Resin System causes chalking



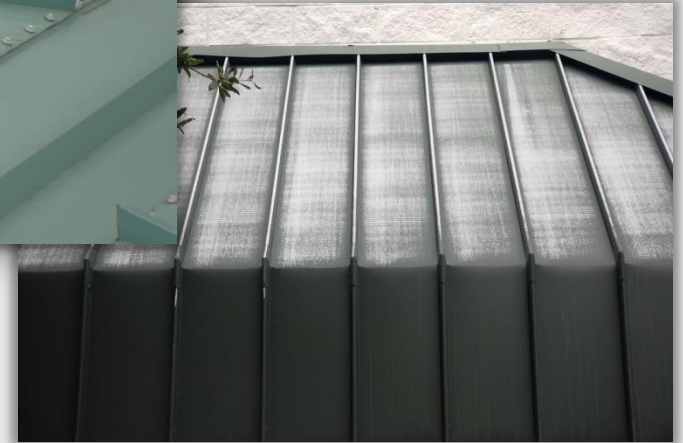
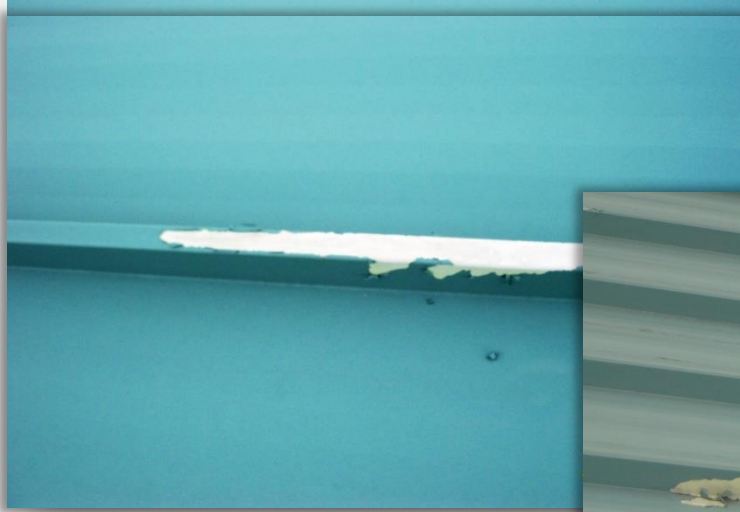
Fundamentals of a Paint Warranty-Fade

- ❖ Failure in the Pigment System causes fading



Fundamentals of a Paint Warranty – Film Integrity

- ❖ Film Integrity failure is rare

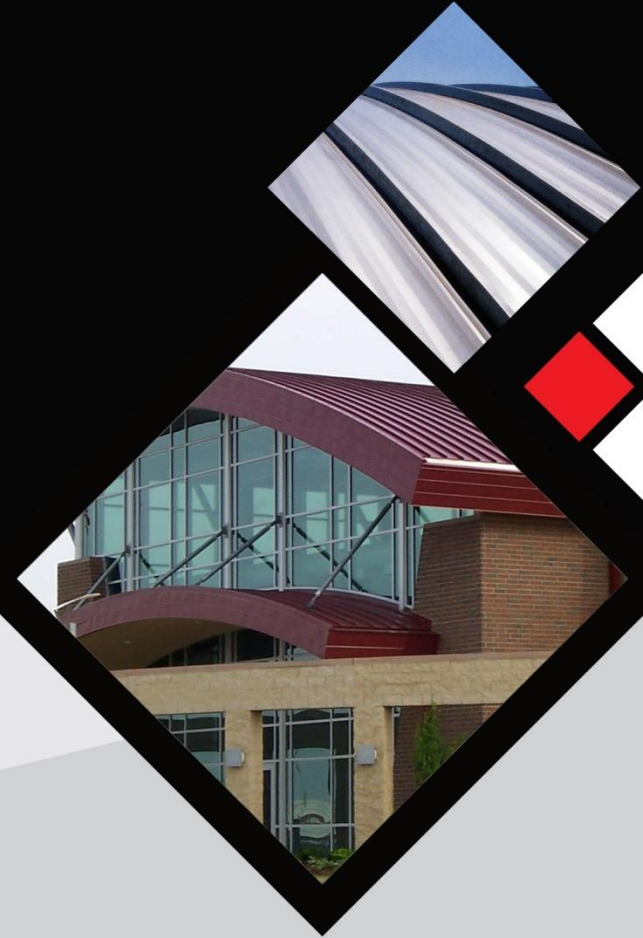


Paint Warranty Summary

- ❖ How long should the term of a paint warranty be?

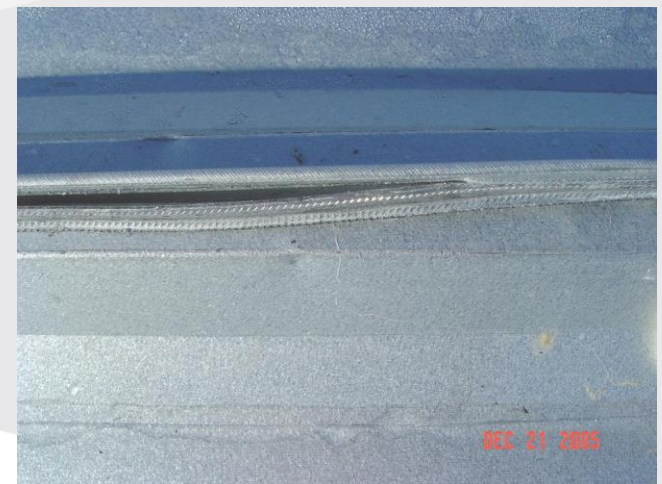
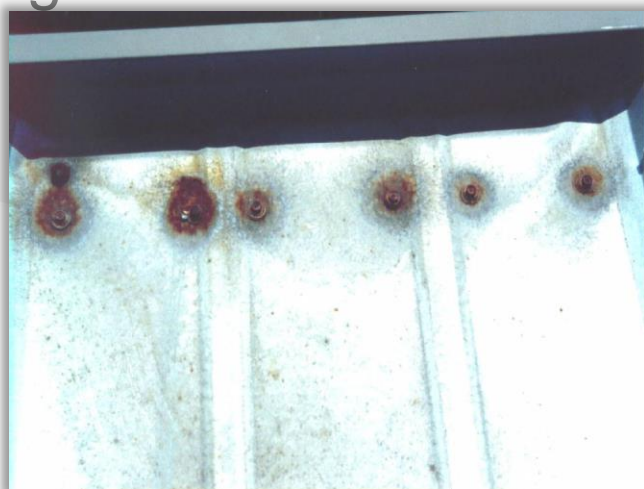


**PAINT AND GALVALUME®
WARRANTY PROVISIONS**



Paint and Galvalume[®] Warranties Require

- ❖ Normal atmospheric conditions
- ❖ Proper handling and storage of the product after shipment
- ❖ Free drainage with a minimum ¼:12 roof pitch
- ❖ An approved seamer for panels that require field seaming
- ❖ Long-life fasteners



Paint and Galvalume[®] Warranties Exclude

Damage Caused By:

- ❖ Long-term contact with
 - Damp insulation
 - Vegetation/Soil
- ❖ Salt water
- ❖ Condensation or harmful fumes
- ❖ Improper cutting of metal panels
- ❖ Dissimilar materials



Corrosion From Dissimilar Materials

❖ Treated Wood



❖ Condensate from rooftop A/C Units



❖ Less noble metals (Copper, lead, graphite, etc)



Galvanic Table

MOST ACTIVE

ZINC
GALVALUME
ALUMINUM
STEEL
LEAD
COPPER
GRAPHITE

LEAST ACTIVE

WEATHERTIGHTNESS WARRANTIES



Weather-tightness Warranties

- ❖ There are two basic types of weather-tightness warranties:
 - Standard
 - Day One



If a roof leaks, someone has not done their job.

A Weathertightness Warranty should be viewed as an insurance policy, NOT as a remedy for poor work.

History

- ❖ Early 70's – metal roofing used in architectural applications
- ❖ Architects began requiring weathertightness warranties
- ❖ Simple roof designs



History

- ❖ Roofs become more complicated
- ❖ More roof systems become available
- ❖ Installer knowledge lags
- ❖ Leaks become more prevalent
- ❖ A more comprehensive warranty is required



History

- ❖ *Day One* warranties created
- ❖ Installer training courses developed
- ❖ Inspections required



WEATHERTIGHTNESS WARRANTY COMPARISON

Standard vs *Day One*

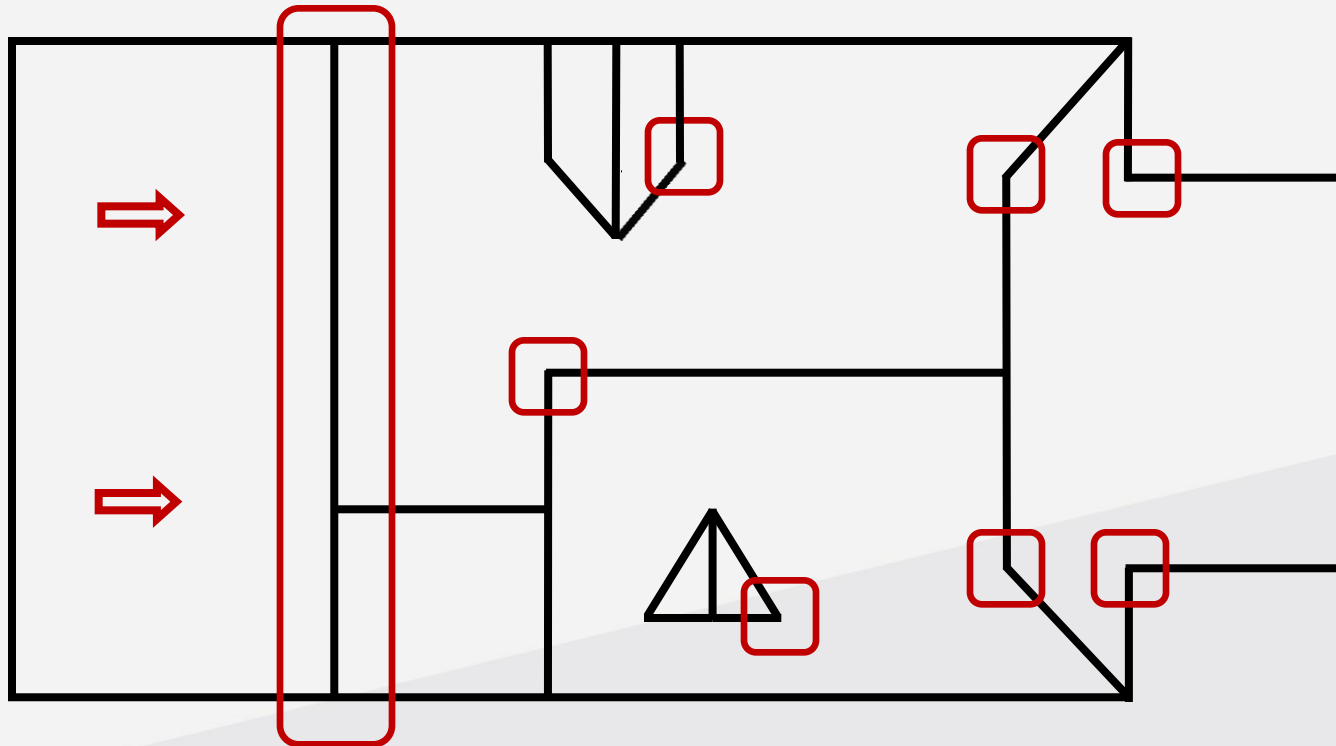
The Roofing Contractor is responsible for:

- ❖ 24 consecutive-month period
- ❖ Proper installation

The Roofing Manufacturer is responsible for:

- ❖ Review of shop drawings

Standard Warranty Plan Review



Indicates conditions that may be excluded from the warranty.

The appearance of the building after exclusions have been applied.



Standard Warranty Provisions

- ❖ Most warranties include trim
- ❖ Most warranties exclude curb and pipe penetrations
- ❖ May or may not require a certified installer



What happens if the roofing contractor goes out of business before the 24-month service period has expired?

- ❖ Usually a lot of finger pointing, including *the design professional, the owner and the contractor*. The parties then look to the manufacturer for relief.
- ❖ The manufacturer has no legal obligation to repair the roof until the 24-consecutive months of leak-free service has expired. At this point, litigation is a possibility.

What happens if the roof system leaks during the term of the warranty, but after it has performed for 24 consecutive months without leaks?

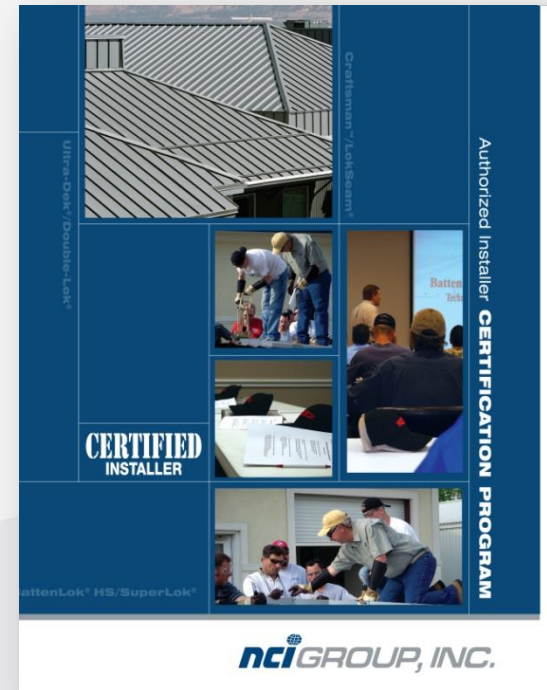
- ❖ If after an inspection by the manufacturer it is determined the roof was properly installed, then the manufacturer may be responsible to repair the roof.
- ❖ If the inspection determines that the roofing contractor did not follow the approved shop drawings, the manufacturer has no obligation to the building owner.

Why specify a Standard Weathertightness Warranty?

- ❖ If it's a simple single slope or double slope building
- ❖ If you have a trusting relationship with the contractor

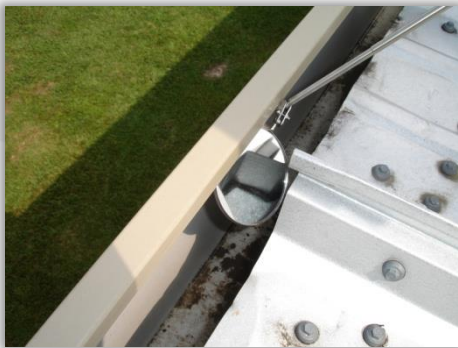
Day One Warranty

- ❖ The Roofing Contractor must have an employee complete the Certified Installer Course
- ❖ The Certified Installer must be present on the job site during the roof installation



Day One Warranty

- ❖ Manufacturer reviews geometry of roof
- ❖ Manufacturer ensures shop drawings are compatible with roof geometry
- ❖ Depending on the size and complexity the manufacturer may inspect the roof up to three times

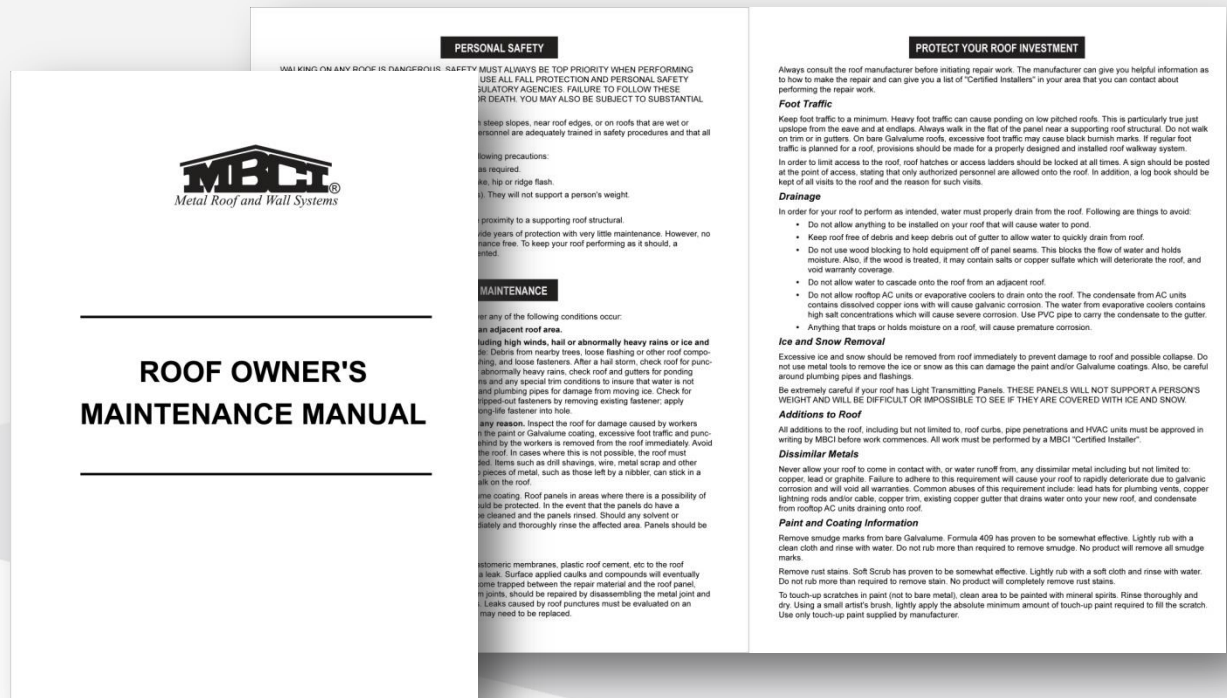


Day One Warranty

- ❖ Inspector performs thorough inspections
- ❖ Inspection reports filed with the roofing contractor
- ❖ Deficiencies not corrected will be brought to the design professional's attention

- ❖ Final inspection performed on completed roof
- ❖ Manufacturer is responsible to the building owner for leaks from the date of substantial completion
- ❖ Roof system may not be modified after installation without the manufacturer's approval

- ❖ Owner's responsibilities:
 - Notify manufacturer of leak
 - Roof maintenance



**ADVANTAGES OF A
DAY ONE WARRANTY**



- ❖ All parties work toward the common goal of a roof with no leaks by providing:
 - Good roof geometry
 - Quality roof system
 - Useful details
 - A certified installer (manufacturer educated)
 - Installer accountability

The Designer's Responsibilities

- ❖ Determine and specify proper roof system for the roof geometry
- ❖ Avoid designs that prevent proper drainage
- ❖ Work with roofing manufacturer to obtain the best possible design
- ❖ Write good specs and police for accuracy
- ❖ Hold installer accountable through inspection reports and pay schedule

The Manufacturer's Responsibilities

- ❖ Provide quality products that have been fully tested
- ❖ Work with designer to ensure that his/her objectives are met
- ❖ Suggest solutions where problems are identified or anticipated
- ❖ Provide proper training to the roofing contractor in the installation of the roof system

The Roofing Contractor's Responsibilities

- ❖ Become certified in manufacturer's product being installed
- ❖ Install roof exactly as shown on manufacturer approved shop drawings
- ❖ Fully comply with project specifications
- ❖ Immediately bring discrepancies to architect's and manufacturer's attention

With a *Day One* warranty, the Manufacturer:

- ❖ Collaborates with both the Designer and the Roofing Contractor to make their jobs easier
- ❖ Provides product knowledge accumulated through years of testing, research and roofing application
- ❖ Supplies technical support
- ❖ Provides accountability through roof inspections



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- ❖ Insulated Metal Panels – 1Hr
- ❖ Retrofit Roof Systems – 1 Hr
- ❖ Retrofit Metal Roof Systems-Ensuring A Successful Project – 3 Hr
- ❖ The Devil Is In the Details – 1 Hr



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