GALVANIZED STEEL SPECIFICATIONS

SUBSTRATE, PAINT FINISH, & APPROVED PRODUCT APPLICATIONS

Specifications include these product lines: ACM & Norandex Brand Gutter Coil, Rainware Accessories, and Roofing Edge Metals.

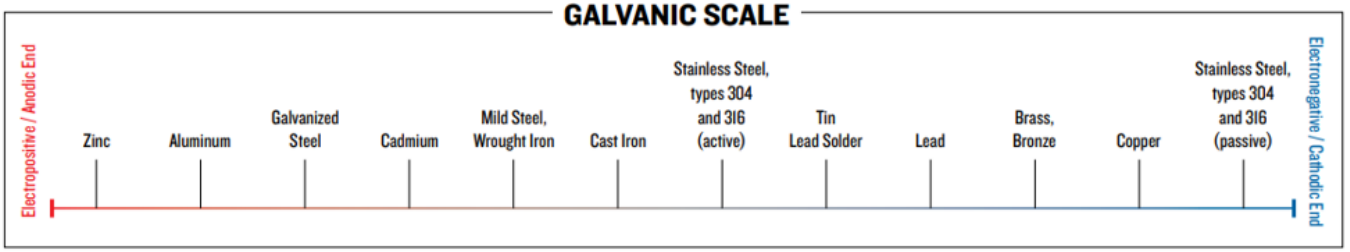
TECHNICAL INFORMATION GALVANIZED STEEL SUBSTRATE

Product – Hot Dipped Galvanized to ASTM A-653-10 All thickness are for bare metal.	Minimum Material Thickness	Thickness Tolerance	Tensile Strength-ksi		Minimum Elongation (2" Minimum Sample)
			Ultimate	Yield	
Edge Metals G-40, CSB					
Mill Finish	.008	+.002 -.000	55.0	40.0	16%
Mill Finish and Painted	.011	+.002 -.001	55.0	40.0	16%
Mill Finish and Painted	.013	+.002 -.001	55.0	40.0	16%
Mill Finish and Painted	.017	+.0015 -.002	55.0	40.0	16%
Rainware G-60 CSB aim GR 40					
28 Ga Finished	.015	+.003 -.000	55.0	40.0	16%
26 Ga Finished	.018	+.003 -.000	55.0	40.0	16%
Rainware G-60 SS GR 80 **26 GA Finished**	.0195	+.003 -.000	90.0	80.0	10%

Recycled Content

1. ACM Galvanized steel products are made from minimum 50% recycled postconsumer content.
2. ACM Galvanized steel products are 100% recyclable.

Substrate Considerations: Care should be taken to avoid contact of Galvanized steel with any corrosive materials during the installation, including, but not limited to: concrete, stucco, pre-treated lumber, corrosive chemicals, fiber cement products, masonry cement, roofing materials made of metallic granules of dissimilar metals (Copper, Zinc, Aluminum, etc.) salt, and dissimilar metals. Electropositive (anodic) materials are more likely to corrode in contact with dissimilar metals in the presence of an electrolyte such as rainwater. The farther apart the metals are from each other on the Galvanic Scale (see below), the speed and the effect of the reaction will increase. Animal confinement buildings can produce waste decomposition by-products, which can be extremely aggressive towards Galvanized steel, creating significant corrosion problems.



TECHNICAL INFORMATION – GALVANIZED STEEL PAINT FINISH

Quality of Match

1. Color Match not to exceed 1.5 ΔE units difference from the Sherwin Williams Color Standard upon the time of installation.
2. Colors exposed to the elements will fade over time.
3. Metallic finishes appearance will vary due to chance alignment of flecks and viewing from different angles.

Available Finishes

1. Sherwin-Williams POLYPREMIER™ Polyester Finish
    a. Smooth
        i. Flat
        ii. Metallic
    b. Bonderite®

Paint Finish Application

1. Pre-treatment: Metal shall be treated on both sides with zinc phosphate chemical conversion to ensure proper paint adhesion and resistance to corrosion.
2. Sherwin Williams POLYPREMIER™ Two Coat Paint System shall be applied to one or both sides of coil.
3. The bare side of one sided painted coils shall be coated with ACM Signature Green Polyester backer.

Coating System	Number of Coats	Primer	Color Coat	Total Topside DFT	Backer
POLYPREMIER Polyester	2 Coat on HDG	.15 -.25 mils	.7 - .8 mils	.65 – .8 mils	.2 - .3 mils

Physical Testing POLYPREMIER™ Polyester Finish	**ASTM Test Method**	**Performance Test Result**
Cross Hatch Adhesion	ASTM D3359	No loss of adhesion between coating and substrate to point of metal rupture with 1/8” cross hatch scribe pattern through coating to bare metal.
Graffiti Resistance	ASTM D6578 / D6578M	Meets and exceeds.
Humidity Resistance	ASTM D2247 100% RH for 1000 Hours	Less than 2% #8 blisters, no loss of adhesion
Impact Resistance (Direct)	ASTM D2794	3x metal thickness inch-pounds, no loss of adhesion.
Pencil Hardness	ASTM D3363	F – 3H
Salt Spray	ASTM D1654 5% Salt Fog at 95°F for 1000 Hours.	No field blistering nor more than 1/8” creep from the scribe after 250 hours exposure.
T-Bend	AST D4145	1T – 2T, no loss of adhesion.

Bonderite® or Paint Grip: Zinc Phosphate Conversion Coating Process

Bonderized chemicals are formulated primarily for treating hot-dip Galvanized surfaces of building products which are to be painted after installation. (Mill finish Galvanized is difficult to paint.) The application is common in tract homes where the color scheme isn't picked out until the home is sold. The treatment coverts the surface of the metal to a non-metallic, crystalline, zinc phosphate coating, which inhibits corrosion, and increases the adhesion and durability of the paint finishes. The visual appearance of Bonderized coating may vary from batch to batch. Since the application is intended for painting, the variation is not an issue. The benefits of Bonderite® coatings are as follows:

1. Clean Grease Free Surface
2. Short term corrosion resistance until painted. (Zinc content can still form white rust if left unpainted for a long period.)
3. Non-conducting bond between the base metal and the paint.
4. Chemically inert surface which prevents reaction between the metal surface and paint ingredients.

APPROVED PRODUCT APPLICATIONS

Gutter Coil: ACM gutter coil is designed for residential and light commercial applications. Gutter coil can be field formed to provide seamless gutter systems. Gutter coil shall be attached per contractor's direction and state / local building codes. ACM gutter coil is not suitable for gutter protection dome cover systems or metal roofing. Galvanized steel is not recommended for animal confinement applications.

Rainware Accessories: ACM rainware accessories are designed for residential and light commercial applications. Galvanized steel is not recommended for animal confinement applications.

Roofing Edge Metals: ACM Roofing Edge Metals are designed for residential and light commercial applications.

Over driven nails and seaming drip edge panels together may cause buckling. Buckled edge metal is not indicative of quality and is solely an installation issue.

ACM recommends minimum 24 gauge thickness for residential flat roof applications.

For Cedar Shake roof applications, check with the manufacture for the correct substrate for roof flashing. In the majority of the applications, Galvanized steel is not recommended. Pressure chemically treated wooden shake shingles could cause staining on the surface of the edge metal and cut ends.

ACM does not recommend the following remedies for ice damming on Galvanized steel metal valleys: ice rakes, salting and other deicing chemicals, or high pressure steam sprayers. These remedies will peel off the paint finish and spoil the esthetics of the home. The use of these remedies will void the paint finish warranty.