



# ALUMINUM SPECIFICATIONS - 3105 TYPE

## SUBSTRATE, PAINT FINISH, & APPROVED PRODUCT APPLICATIONS

Specifications include these product lines: Gutter Coil, Rainware Accessories, Trim Coil, Soffit & Fascia, and Roofing Edge Metals.

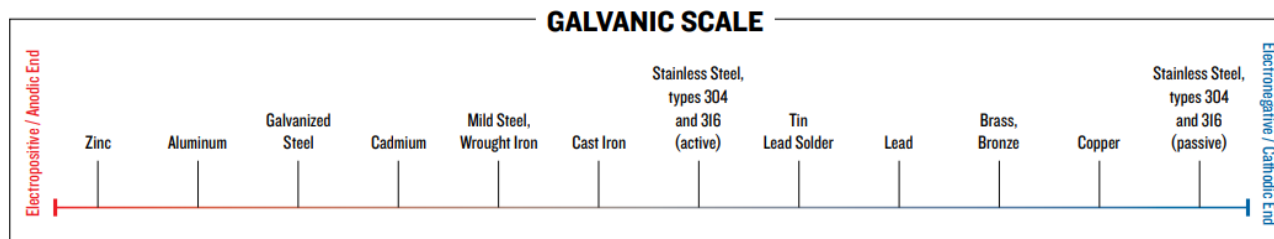
### TECHNICAL INFORMATION ALUMINUM SUBSTRATE (CONFORMS TO ASTM B209)

Alloy & Temper	Product Thickness	Tensile Strength-ksi		Minimum Elongation (2" Minimum Sample_
		Ultimate	Yield	
<b>3105-H24</b>				
Gutter Coil	.027 - .032	22.0	18.0	3 – 4%
Rainware Accessories	.019	22.0	18.0	2%
Fascia	.012 - .024	22.0	18.0	2 – 3%
<b>3105-H26</b>				
Drip Edge	.016 - .032	25.0	21.0	3 – 4%
<b>3105-H28</b>				
Soffit	.012 - .019	28.0	24.0	2 – 4%
Trim Coil	.019 - .024	28.0	24.0	2 – 4%

#### Recycled Content

1. ACM Aluminum products are made from 92 - 99% recycled content. (Reference Plant Specific Green Circle documentation.)
2. ACM Aluminum products are 100% recyclable.

**Substrate Considerations:** Care should be taken to avoid contact of any Aluminum materials with any corrosive materials during the installation, including, but not limited to: concrete, stucco, pre-treated lumber, cedar shake shingles, corrosive chemicals, fiber cement products, masonry cement, roofing materials made of metallic granules of dissimilar metals (Copper, Zinc, Steel, 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 the Aluminum material, creating significant corrosion problems.



## **TECHNICAL INFORMATION - ALUMINUM PAINT FINISH**

### **Quality of Match**

1. Color Match not to exceed 1.5  $\Delta E$  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™
  - a. Smooth
    - i. Flat
    - ii. Metallic
  - b. Wood Grain Embossed
    - i. Northern Pine
    - ii. Southern Cedar
  - c. Pebbled or Textured (Low Mar)
2. Sherwin-Williams Valshield™: PVC (Select Trim Coils)

### **SHERWIN-WILLIAMS COATING SYSTEMS**

Coating System	Number of Coats	Primer	Color Coat	Total Topside DFT	Backer
<b><u>POLYPREMIER™</u></b>	2 Coat	.15 -.25 mils	.7 - .8 mils	.7 – .8 mils	.2 - .3 mils
<b><u>Valshield™ PVC</u></b>	2 Coat	.1 - .2	3.0 – 8.0 mils	3.0 – 8.0 mils	.15 - .25 mils

### **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. Sherwin Williams Valshield™ PVC Paint System shall be applied on one side of select trim coils.
4. The bare side of one sided painted coils shall be coated with ACM Signature Green Polyester backer.

**POLYESTER POLYPREMIER™ FINISH SPECIFICATIONS**

<b>Physical Testing POLYPREMIER™ Polyester</b>	<b>ASTM Test Method</b>	<b>Performance Test Result</b>
<b>Cross Hatch Adhesion</b>	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.
<b>Graffiti Resistance</b>	ASTM D6578 / D6578M	Meets and exceeds.
<b>Humidity Resistance</b>	ASTM D2247 100% RH for 1000 Hours	No blisters or loss of adhesion.
<b>Impact Resistance (Direct)</b>	ASTM D2794	1.5x metal thickness inch-pounds, no loss of adhesion.
<b>Pencil Hardness</b>	ASTM D3363	F – 3H
<b>Salt Spray</b>	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.
<b>T-Bend</b>	AST D4145	1T – 2T, no loss of adhesion.

**PVC VALSHIELD FINISH SPECIFICATIONS**

<b>Physical Testing Valshield™ PVC</b>	<b>ASTM Test Method</b>	<b>Performance Test Result</b>
<b>Film Adhesion (Dry, Wet, &amp; Boiling Water)</b>	ASTM D3359	No removal of film under tape in the cross-hatched area.
<b>Humidity Resistance</b>	ASTM D2247 100% RH at 100°F 2000 Hours	No field blisters or loss of adhesion.
<b>Impact Resistance</b>	ASTM D2794	1.5x metal thickness inch-pounds, no loss of adhesion.
<b>Pencil Hardness</b>	ASTM D3363	B - H
<b>Salt Spray</b>	ASTM D1654 2000 Hours	No field blistering nor more than 1/16" (2mm) creep from the scribe after 250 hours exposure.
<b>T-Bend</b>	ASTM D4145	0T – 1T, no loss of adhesion.
<b>Specular Gloss 60°</b>	ASTM D523	15 -55

## **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.

Due to potential fading and esthetic issues, ACM gutter coil is not suitable for gutter protection dome covers or metal roofing.

ACM does not recommend seamless runs over 50 feet without the use of an expansion joint or breaking into smaller runs. Buckled gutter is not indicative of quality, but is solely an installation issue.

**Rainware Accessories:** ACM rainware accessories are designed for residential and light commercial applications.

**Soffit:** ACM soffit is designed for residential applications.

Oil canning is a naturally occurring phenomenon during the milling process with some soffit thicknesses and ACM guarantees the following oil canning free spans:

.012"    2 foot spans

.019"    6 foot spans

**Oil canning free spans over 6 feet require using thicker gauge commercial grade soffit profiles.**

**Fascia:** ACM fascia is designed for residential applications.

Over driven nails, face nailing, and seaming fascia panels together, may cause the run of fascia to buckle. Buckled fascia is not indicative of quality, but is solely an installation issue.

**Trim Coil:** ACM trim coil is designed for residential trim applications such as corners, frieze board, or wrapping fascia.

The same precaution for pre-made fascia should be made with field formed fascia. Over driven nails, face nailing, and seaming fascia panels together, may cause the run of fascia to buckle. Buckled trim coil is not indicative of quality, but is solely an installation issue.

**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.

ACM recommends minimum .050 thickness for residential flat roof applications.

Some Cedar Shake applications may not be suitable due to corrosion issues. Refer to manufacturer's installation recommendations.