

# AMC Limited

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## **Comparison of Coatings Specifications**

The following table is based on voluntary specifications developed by the American Architectural Manufacturers Association (AAMA). The specifications are compared as follows:

<b>Test Parameter</b>	<b>AAMA 2603: 02</b>	<b>AAMA 2604: 05</b>	<b>AAMA 2605:05</b>
Name of Specification	Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels	Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels	Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels
Suggested Uses	Residential, All Interior Applications	Commercial, Industrial, High-end Residential, High Traffic areas	High performance, Architectural and Monumental Applications

## **Pretreatment Requirements**

<b>Test Parameter</b>	<b>AAMA 2603: 02</b>	<b>AAMA 2604: 05</b>	<b>AAMA 2605:05</b>
Metal Preparation and Pretreatment	Multi-stage cleaning and pretreatment	Multi-stage cleaning and pretreatment	Multi-stage cleaning and pretreatment
Pretreatment Type	Chemical conversion coating	Chrome or non-chrome chemical conversion coating	Chrome or non-chrome chemical conversion coating
Pretreatment Coating Weight	Not specified	Chrome =30 mg/ft <sup>2</sup> minimum Non-chrome per supplier's specification	Chrome =40 mg/ft <sup>2</sup> minimum Non-chrome per supplier's specification

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## Paint Film Requirements

Test Parameter	AAMA 2603: 02	AAMA 2604: 05	AAMA 2605:05
Dry Film Thickness	20 microns min.	Primer: 7.5 ± 2.5 micron Top Coat: 25 microns min. Total: 30 microns min.	Primer: 7.5 ± 2.5 micron Top Coat: 25 microns min. Total: 30 microns min.
Sealant Compatibility	Meets AAMA 800	Meets AAMA 800	Meets AAMA 800
Color Uniformity	Within established color range	Within established color range	Within established color range
Specular Gloss	+/- 5 units of specification (high ≥ 80, medium= 20-79, low ≤ 19)	+/- 5 units of specification (high ≥ 80, medium= 20-79, low ≤ 19)	+/- 5 units of specification (high ≥ 80, medium= 20-79, low ≤ 19)
Dry Film Hardness	H min.	F min.	F min.

## Adhesion Requirements

Test Parameter	AAMA 2603: 02	AAMA 2604: 05	AAMA 2605:05
Dry Adhesion	0% failure (no loss)	0% failure (no loss)	0% failure (no loss)
Wet Adhesion	0% failure (no loss)	0% failure (no loss)	0% failure (no loss)
Boiling Water Adhesion	Not specified	0% failure (no loss)	0% failure (no loss)
Impact Resistance	No removal of film from substrate	No removal of film from substrate	No removal of film from substrate
Abrasion Resistance	None specified	Abrasion coefficient value = 20 min.	Abrasion coefficient value = 40 min.

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## Chemical Resistance Requirements

Test Parameter	AAMA 2603: 02	AAMA 2604: 05	AAMA 2605:05
Muriatic Resistance 10%, 18-27 °C, 15-min exposure	No blistering or visual change	No blistering or visual change	No blistering or visual change
Mortar Resistance 24-hour exposure	No loss of film adhesion or visual change	No loss of film adhesion or visual change	No loss of film adhesion or visual change
Nitric Acid Resistance 70 %, 30-min exposure	Not specified	5 Delta E (Hunter) max. color change	5 Delta E (Hunter) max. color change
Detergent Resistance 38°C, 72-hour exposure	No loss of adhesion, no blistering, no significant visual change	No loss of adhesion, no blistering, no significant visual change	No loss of adhesion, no blistering, no significant visual change
Window Cleaner Resistance 24-hour exposure	Not specified	No blistering or appearance change	No blistering or appearance change

## Corrosion Resistance Requirements

Test Parameter	AAMA 2603: 02	AAMA 2604: 05	AAMA 2605:05
Humidity Resistance 38°C, 100% RH	1,500-hours exposure No more than ``few" blisters size 8, figure no. 4, ASTM D 714	3,000-hours exposure No more than ``few" blisters size 8, figure no. 4, ASTM D 714	4,000-hours exposure No more than ``few" blisters size 8, figure no. 4, ASTM D 714
Salt Spray Resistance 5% Salt Solution, 38°C	1,500-hours exposure: min. rating of 7 on scribe or cut edges; min. blister rating of 8 in the field (ASTM D 1654)	3,000-hours exposure: min. rating of 7 on scribe or cut edges; min. blister rating of 8 in the field (ASTM D 1654)	4,000-hours exposure: min. rating of 7 on scribe or cut edges; min. blister rating of 8 in the field (ASTM D 1654)

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## ***Weathering Resistance Requirements***

<b>Test Parameter</b>	<b>AAMA 2603: 02</b>	<b>AAMA 2604: 05</b>	<b>AAMA 2605:05</b>
Accelerated Exposure	1,000 hours in Atlas Type "XW" weatherometer; no adhesion loss; slight chalking or color change	Not specified	Not specified
Outdoor Exposure South Florida, 45° south	1 year No adhesion loss; slight chalking or fading	5 years 5 Delta E (Hunter) max. color change, chalking < 8 (ASTM D 4214), gloss retention $\geq$ 30%, erosion resistance < 10% film loss	10 years 5 Delta E (Hunter) max. color change, chalking < 8 (ASTM D 4214), gloss retention $\geq$ 50%, erosion resistance < 10% film loss