

## Do AAMA Specifications Apply to the Prepainted Industry?

In the North American prepainted metal industry, we occasionally encounter references to “AAMA” and especially “AAMA 2605.” This tool kit has been created to clarify what AAMA is, what the various AAMA performance standards are and how they are applied, and their pertinence to the prepainted metal industry for construction products.

On January 1, 2020 the American Architectural Manufacturers Association (AAMA) and the Insulating Glass Manufacturers Alliance (IGMA) unified into one organization, the Fenestration and Glazing Industry Alliance (FGIA). FGIA is focused on building better industry synergies from glass to framing. FGIA is dedicated to improving home and building performance through glass, window, door and skylight technology and standards.

AAMA served as the source of performance standards, product certification and educational programs for the fenestration industry. Founded in 1936, AAMA was the leading trade association representing over 300 members producing window, door, skylight, sloped glazing, curtain wall and storefront products and components for both the residential and commercial construction markets across North America.

IGMA was the North American association of insulating glass manufacturers, suppliers of component materials and other industry-related professionals dedicated to upgrading product performance by promoting awareness of technological developments in the industry. In 2000, IGMA was created as a result of a successful merger between the Insulating Glass Manufacturers Association of Canada (IGMAC) and the Sealed Insulating Glass Manufacturers Association (SIGMA).

FGIA, representing the efforts of AAMA, IGMA, IGMAC and SIGMA, has created standard specifications for:

- Windows, Doors and Skylights
- Storm Doors and Windows
- Manufactured Housing Windows
- Sunrooms
- Protective Glazing
- Thermal Barrier Test and Performance
- Finishes

There are three types of finishes (coatings) categories recognized by FGIA:

This Tool Kit is part of a series of educational aids developed by the members of the National Coil Coating Association. NCCA is a trade association of coil coaters and suppliers of raw materials and equipment used in the coil coating process. The association concentrates its efforts on providing educational resources and assisting its members in providing superior products and services to their customers. NCCA Tool Kits are information tools and should not be used as substitutes for instructions from individual manufacturers. Always consult with individual manufacturers for specific instructions regarding their products and equipment.

- AAMA 2603 Voluntary Specification, Performance Requirements and Test Procedures for **Pigmented Organic Coatings** on Aluminum Extrusions and Panels (with Coil Coating Appendix)
- AAMA 2604 Voluntary Specification, Performance Requirements and Test Procedures for **High Performance Organic Coatings** on Aluminum Extrusions and Panels (with Coil Coating Appendix)
- AAMA 2605 Voluntary Specification, Performance Requirements and Test Procedures for **Superior Performing Organic Coatings** on Aluminum Extrusions and Panels (with Coil Coating Appendix); previously AAMA 621.

NOTE: The finishes specifications will continue to use the “AAMA” term, since it is recognized widely.

To use an AAMA label, a licensed manufacturer *of an assembly* (e.g., storm doors, windows, etc.), whose products fulfill the requirements of the prescribed standards must comply with the AAMA Certification Program rules and regulations. Independent test verification is required, with one important exception: corrosion and weathering data may be supplied by coatings manufacturers.

Note: Although the above three AAMA performance specifications reference coil coatings in the appendix of each document, the specifications limit the testing requirements to an aluminum substrate. Common steel substrates such as hot-dipped galvanized steel and Galvalume are not referenced in the specifications.

To achieve certifications, many functional properties of the coatings are evaluated, along with coatings performance requirements for:

- Color retention
- Chalk resistance
- Gloss retention.

This tool kit only discusses these three characteristics for AAMA 2603, 2604, and 2605.

Any type of coating may be considered—liquid or powder—for each of the three performance categories. In general, AAMA 2603 is considered a specification for coated aluminum for interior parts, such as retail or commercial storefronts in a mall, or exterior parts where weathering requirements are minimal.

AAMA 2604 and 2605 standards have requirements associated with coated aluminum used in many long-term exterior applications for the building and construction markets. AAMA 2604 (high performance organic coatings, as described in the title of AAMA 2604) are often used for store fronts, windows, doors, and low-rise curtain wall. AAMA 2605 (superior performing organic coatings, as described in the title of AAMA 2605) are specified for applications such as monumental buildings, curtain wall, and stadiums.

The following table shows the salient differences between the AAMA 2603, 2604 and 2605:

Property	AAMA 2603	AAMA 2604	AAMA 2605
Humidity resistance	1,500 hours	3,000 hours	4,000 hours
Salt Spray resistance	1,500 hours	3,000 hours	2,000 hours
Florida exposure (45 °S, open-rack)	1 year	5 years	10 years
Color retention	Slight change	≤ 5 ΔE <sub>Hunter</sub>	≤ 5 ΔE <sub>Hunter</sub>
Chalk resistance	Slight	8 rating, or better	8 rating, or better (6 rating, or better, for whites)
Gloss retention	Slight change	≥ 30%	≥ 50%

How do AAMA specifications, which are primarily associated with coated aluminum (extrusions, metal composite panels, etc.), apply to coil coated metal? In most cases, AAMA specifications are not relevant in the prepainted metal industry. However, architects and others have learned that AAMA 2605 represents top performing coatings technology, and, in most cases, manufacturers choose PVDF (polyvinylidene difluoride) or FEVE (fluoroethylene vinyl ether) technologies to meet these requirements. As mentioned earlier, however, *any* coating that meets the requirements of the AAMA 2605 specification can be labeled “AAMA 2605.”

Although AAMA 2605 has become shorthand for PVDF/FEVE technology, the door is wide open for technologies that meet the exposure requirements.

This shorthand also applies to AAMA 2603 and 2604, where the terms imply “nominal performance” and “high performance,” respectively. But the shorthand here may create confusion. A standard coil coating polyester may easily meet the weathering requirements of AAMA 2604.

As described above, AAMA specifications are voluntary. Some manufacturers feel an AAMA label (*i.e.*, a product that has been thoroughly tested and meets the AAMA requirements) is imperative, where others may not see the need for a certification. Architects, however, have learned to specify AAMA 2605 when they wish to use the most durable technology available, so you may encounter this requirement and find it written into a specification.