

# ANODIZED PLUS®

YKK AP Anodized Finishes with Proven Advantages



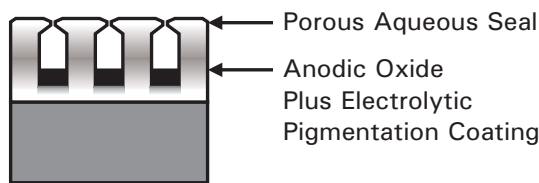
Entrances | Storefront | Curtain Wall | Window Wall | Balcony Doors | Windows | Sun Control



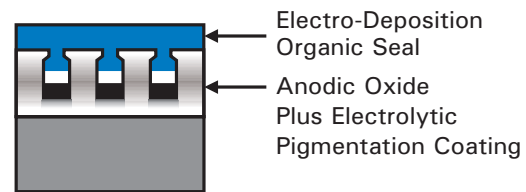
# An Introduction to Anodized Plus®

## Conventional Anodized vs. YKK AP Anodized Plus®

### AAMA 611 – Conventional Anodized Finish



### AAMA 612 – YKK AP Anodized Plus® Finish



The synergistic effects of this new aluminum finish result in important advantages:

- Increased resistance to chemical corrosion.
- Superior color and gloss retention.
- Enhanced protection of aluminum substrate.

**What is Anodized Plus?** It is another innovation from YKK AP. Anodized Plus provides a unique protective seal on anodic finishes. Its anodic coating combined with an organic seal offers the dual benefits of enhanced durability and resistance to staining and degradation.

Conventional anodic coatings rely on hot water or steam sealing to close the porous anodic layer; however, it is not possible to close every pore using this process. YKK AP Anodized Plus replaces the conventional sealing process with a unique non-aqueous, electrodeposited organic seal that provides complete protection for the anodic oxide and the pigmentation coating.

YKK AP controls every step in the manufacturing process under one roof. To ensure the quality and the integrity of the aluminum alloy we cast our own aluminum logs for extrusion. Our method of electrolytic coloring by vertical immersion provides unmatched color consistency and eliminates the need for color range samples. The colors available are white, black, clear, champagne, medium and dark bronze.

YKK AP Anodized Plus meets all of the requirements for the newest standard for anodized finishes, AAMA 612. To ensure that the anodized finish on your next project meets your aesthetic requirements and stands up to chemicals commonly found on construction sites and harsh environments specify AAMA 612 — specify YKK AP Anodized Plus.

All YKK AP products are created in facilities that are models of energy efficiency and environmental responsibility. YKK AP's U.S. manufacturing plant in Dublin, Georgia, is ISO 14001 certified and has a 73% recycling rate. The plant:




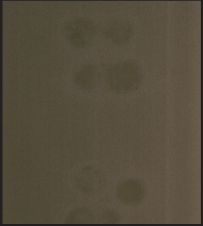

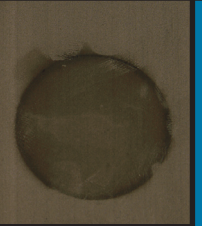


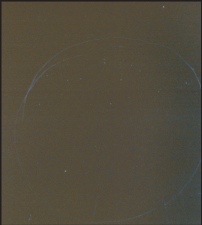
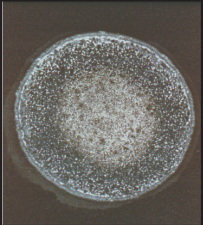

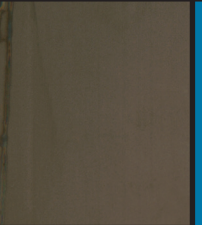
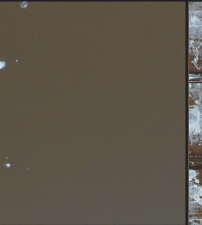

- Recycles 100% of aluminum waste on-site
- Has reduced the amount of other waste materials sent to the landfill by 40%
- Uses regenerative burners to save 50% on the melting/casting operation's fuel consumption
- Captures and burns 93% of all solvent emissions from the paint line
- Uses state-of-the-art techniques for waste water treatment

## COMPARISON OF ANODIZED FINISH STANDARDS

TEST		PERFORMANCE		
		AAMA 612	AAMA 611	
			CLASS I	CLASS II
FINISH	Coating Thickness	0.7 mils (18 microns)	0.7 mils (18 microns)	0.4 mils (10 microns)
	Color Uniformity	Samples Shall Not Differ More Than 5 Delta E	Within Established Color Range	
STRENGTH	Hardness	Minimum 3H Hardness	Michael Clark Abrasion Test	
	Muriatic Acid Resistance	No Blistering & No Visual Change in Appearance	No Test Specified	
	Mortar Resistance	No Loss of Film Adhesion & No Visual Change in Appearance	No Test Specified	
	Nitric Acid Resistance	Maximum Change in Color of 5 Delta E	No Test Specified	
	Detergent Resistance	No Loss of Adhesion, No Blistering & No Visual Change in Appearance	No Test Specified	
	Window Cleaner Resistance	No Blistering & No Visual Change in Appearance	No Test Specified	
	Craze Resistance	No Cracking Below a Metal Temperature of 82° C (180° F)	No Cracking Below a Metal Temperature of 82° C (180° F)	
	Humidity Resistance	Only a Few Small Blisters As Defined by ASTM D 714	No Test Specified	
DURABILITY	Salt Spray Resistance	Samples Exposed for 4,000 hrs ASTM D 1564	3,000 hrs ASTM B 117	1,000 hrs ASTM B 117
	Weathering	5-Year South Florida Exposure	10-Year South Florida Exposure	
	Gloss Retention	Shall Be a Minimum of 50% After 5 Years South Florida	No Test Specified	
	Erosion	Less Than 10% Film Thickness Lost After 5 Years South Florida	No Test Specified	
	Seal Test	Quality of Seal Determined Through Performance Tests Shown Above	Maximum Weight Loss of 40mg/cm <sup>2</sup>	

An anodized finish that is tough enough to resist damage from construction site chemicals, harsh environments and now Father Time. YKK AP's **Anodized Plus®** material shipped from the Dublin Manufacturing Facility, will meet or exceed all of the requirements for AAMA 612 — the latest standard for anodized finishes.

### Specify AAMA 612 — Specify YKK AP Anodized Plus®, Now With 10 Year Finish Warranty\*

MURIATIC ACID RESISTANCE			NITRIC ACID RESISTANCE			WINDOW CLEANER RESISTANCE		
	YKK AP ANODIZED PLUS®	CONVENTIONAL ANODIZING		YKK AP ANODIZED PLUS®	CONVENTIONAL ANODIZING		YKK AP ANODIZED PLUS®	CONVENTIONAL ANODIZING
MORTAR RESISTANCE			DETERGENT RESISTANCE			SALT SPRAY RESISTANCE		
	YKK AP ANODIZED PLUS®	CONVENTIONAL ANODIZING		YKK AP ANODIZED PLUS®	CONVENTIONAL ANODIZING		YKK AP ANODIZED PLUS®	CONVENTIONAL ANODIZING

Anodizing is one of the most beautiful, unique and economical ways to finish architectural aluminum. The anodizing process enhances the intrinsic luster of aluminum and simply can not be duplicated with paint. Architects and designers desire the appearance of anodized finishes, but are concerned with the vulnerability of the finish to staining and degradation. In an attempt to improve the durability of anodized finishes manufacturers have increased the thickness of the oxide coating. But, this simply masks the problem and does not address the real issue. The inherent weakness of the conventional anodizing process is the inadequate seal of the anodic pores not the thickness of the oxide coating. Even the smallest openings in the seal leaves the anodized finish vulnerable to attack. In 1965 Honny Chemical developed a new sealing process that seals 100% of the pores 100% of the time; this is the sealing process used for **YKK AP Anodized Plus®**.

**\*YW3N Anodized White finish is warrantied for 5 years.**





YKK AP maintains a state-of-the-art ISO 14001 certified manufacturing facility in Dublin, Georgia.

## YKK AP Locations

**Headquarters:** 101 Marietta Street NW, Suite 2100 Atlanta, GA 30303 Tel: 678-838-6000 Fax: 678-838-6001

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**Texas Manufacturing:** 346 E. Belt Line Rd, Suite 600 Coppell, TX 75019 Tel: 469-528-6900 Fax: 469-528-6907

**Midwest Manufacturing:** 8748 Jacquemin Dr, Suite 400 West Chester, OH 45069 Tel: 513-942-7200 Fax: 513-682-2123

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