

> TECHNICAL BULLETIN

Artisan™ Pre-Colored Thermoplastics High-Gloss Nylon (PA6) Formulations

High-performing, durable products are at the forefront of consumer demands. For outdoor applications in lawn & garden, powersports, tools and hardware, and marine, your products also need long-lasting aesthetics that appeal to consumers.

Artisan[™] Pre-Colored Thermoplastics mimic the vibrant, high-gloss appearance of paint, while offering premium UV stability, minimized scratch appearance, and inherent corrosion resistance.

Available in a wide range of customizable colors, these impact-modified nylon formulations eliminate secondary painting processes—unlike traditional materials such as painted plastics or metals—providing the added manufacturing and sustainability benefits of reducing energy use and removing VOC emissions.



COMPARISON OF NYLON, METAL, AND PLASTIC

| Characteristics | Artisan™ Nylon Solution | Painted Metal | Painted Plastic | Traditional Molded-in Color | Impact Modified Nylon | PA Ionomer Alloy |
|--------------------------------|-------------------------------|------------------|--------------------|-----------------------------------|-----------------------------|------------------------|
| Aesthetic | Very Good | Excellent | Excellent | Good | Very Good | Very Good |
| Scratch Appearance | Excellent | Poor | Poor | Good | Excellent | Excellent |
| Scratch & Mar Resistance | Very Good | Excellent | Excellent | Poor | Very Good | Excellent |
| Color Customization | Good | Excellent | Excellent | Very Good | Good | Good |
| Stress Whitening | Excellent | Fair | Fair | Poor | Excellent | Excellent |
| Weatherability | Good | Excellent | Excellent | Very Good | Good | Very Good |
| Temperature Performance | Good | Excellent | Fair | | | Good |
| Corrosion Resistance | Excellent | Fair | Excellent | Excellent | Excellent | Excellent |
| Processability | One Step | Multi Step | Multi Step | One Step | One Step | Complex One Step |
| Total Production Cost | \$\$\$ | \$\$\$\$\$ | | \$\$ | \$\$\$ | \$\$\$\$ |
| Order Quantity Restrictions | Some | Some | Some | None | More | More |



KEY PROPERTIES

Features: high-gloss finish, UV stability, scratch resistance, chemical/corrosion resistance, cold temperature impact resistance, heat resistance

| Properties | Test Method | Artisan™ AR6000-0007 HI UV* | | |
|---------------------------------|---|---|--|--|
| Gloss Level** | Gloss reading at 60 degrees | 80-93 | | |
| Molding Shrinkage – Across Flow | ASTM D955 | 0.009 to 0.013 in/in | | |
| Tensile Strength (Yield) | ASTM D638 | 7300 psi | | |
| Tensile Strength (Break) | ASTM D638 | 5300 psi | | |
| Tensile Elongation (Yield) | ASTM D638 | 6.0% | | |
| Flexural Modulus | ASTM D790 | 270500 psi | | |
| Flexural Strength (Yield) | ASTM D790 | 9950 psi | | |
| Notched Izod Impact | ASTM D256 | -4°F (-20°C) 5 ft-lb/in 73°F (23°C) 11 ft-lb/in | | |
| Unnotched Izod Impact | ASTM D256 | -4°F (-20°C) 29 ft-lb/in 73°F (23°C) 30 ft-lb/in | | |
| | | | | |
| Color & Aesthetics*** | Green, medium blue, dark blue, red, orange, white, gray, black Color customization available based on specific needs | | | |

- * Reflects average of several colors, properties shift slightly depending on color
- ** Gloss level varies based on tooling temperature
- *** UV data available upon request





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