THE TECHNOLOGY:

- **Anodized Layer**: The glass-clear, sapphire-hard anodized layer resists chemicals, paint, abrasion and dirt.
- **Sealed Image**: The image is absorbed into the pores.
- **Aluminum Layer**: The rigid aluminum base won't peel, crack or delaminate.

UV STABLE  
ABRASION RESISTANT  
TEMPERATURE RESISTANT  
FLUID RESISTANT  
RECYCLABLE

EXCEPTIONAL DURABILITY  
WIDELY SPECIFIED  
ALWAYS READABLE

For over 50 years, the United States Department of Defense has specified Metalphoto photosensitive anodized aluminum for durable labels, nameplates, schematics and control panels installed in harsh operating environments.

The United States Navy first adopted Metalphoto in 1958 for shipboard labels, placards and damage control signs. Since then, Metalphoto has been incorporated into several major Army weapons systems including the Abrams Tank, the Bradley Fighting Vehicle and the HMMWV. Both Marine Corps and Army Depots operate Metalphoto production facilities. All Departments utilize Metalphoto for Item Unique Identification (IUID) barcode labels as specified under MIL-STD-130.

**When durability matters, specify Metalphoto.**

**PRODUCT BENEFITS**

**Exceptionally Durable:**
- UV-stable image is permanently sealed within the anodized aluminum.
- Virtually impervious to chemicals, heat, abrasion, salt spray and sunlight.
- Certified for 20-year plus outdoor application.
- Earned more top scores than any other IUID barcode label material tested by the U.S. Navy (NSWC, Corona Division, IUID Center; August 2011).

**Widely Specified:**
- Meets a wide array of commercial, government and military specifications.

**Photographic Resolution:**
- Photographic image affords extreme detail and contrast at any size.
- Anti-counterfeit security printing is available.
Because of its ability to perform across a range of challenging environments, Metalphoto meets an array of government, industrial and military specifications. Visit [www.metalphoto.com](http://www.metalphoto.com) for a list of specifications for which Metalphoto is qualified.

### Technical Specifications

**Material:** Anodized Aluminum Sheets  
**Sizes:** 10” x 12”, 12” x 20”, 20” x 24”, 20” x 40”, 24” x 40”  
**Thicknesses:** .003”, .005”, .008”, .012”, .020”, .032”, .039”, .063”, .090”, .125”  
**Finishes:**

- **Matte** - non-reflective with dull finish  
- **Satin** - semi-gloss medium reflective material  
- **#4** - brushed to resemble a stainless steel finish  
- **Gloss** - highly reflective, mirror-like

### Performance Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion Resistance</td>
<td>No pronounced image loss, degradation or reduced readability after 7,000 cycles on an abrading wheel.</td>
</tr>
<tr>
<td>Acid Corrosion</td>
<td>No deterioration or image degradation after 24 hours in 3% nitric acid.</td>
</tr>
<tr>
<td>Heat Resistance</td>
<td>Standard Metalphoto readable up to 500°F. Image Intensified Metalphoto readable up to 800°F. Both tested for a 24-hour oven exposure. Inquire for heat resistance up to 1,000°F with Extra High Temperature (XHT) treatment.</td>
</tr>
<tr>
<td>Salt Spray Corrosion</td>
<td>No deleterious effect after a 720-hr salt spray (fog) test. 2.6” Very Good” corrosion resistance after 113 days seawater exposure.</td>
</tr>
<tr>
<td>Accelerated Light and Weather Resistance</td>
<td>No pronounced deterioration of legibility after 400-hr carbon arc weatherometer exposure. (≈ 20+ year outdoor life)</td>
</tr>
<tr>
<td>Accelerated Oxygen Aging</td>
<td>No discoloration or fading after 96-hr/300 psi/70°C oxygen bomb aging</td>
</tr>
<tr>
<td>Stain Resistance</td>
<td>No black fading when plates are exposed to tincture of iodine.</td>
</tr>
<tr>
<td>Cleaning Resistance</td>
<td>No deleterious effects when tested with alkaline cleaners (MILC-87937 or equivalent) for aircraft surfaces.</td>
</tr>
<tr>
<td>Low Temperature Resistance</td>
<td>No deleterious effect or image fade after 1 hour at -50°F. No impairment of legibility upon exposure at -67°F.</td>
</tr>
<tr>
<td>Fungus Resistance</td>
<td>Visual reading of &quot;0&quot; per ASTM-G21.</td>
</tr>
<tr>
<td>Thermal Shock</td>
<td>No deterioration after 3 cycles between -65°C and 125°C.</td>
</tr>
</tbody>
</table>

### Produce or Procure?

Metalphoto can be easily produced at your location. Alternatively, finished parts may be purchased from a network of approved suppliers around the world. Contact Horizons Imaging Systems Group for an analysis of the production requirements of your application(s).

### To Order

Call **1-800-482-7758** or visit our website at [Metalphoto.com](http://www.metalphoto.com)

*Horizons ISG does not warrant the performance of its materials in any environment. Metalphoto is a registered trademark of Horizons Incorporated.*

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