

metalphoto®

Photo Anodized Aluminum



Exceptionally Durable. Widely Specified. Always Readable.

For over 50 years, industrial and military engineers have specified Metalphoto photosensitive anodized aluminum for durable nameplates, barcode labels, service schematics and control panels installed in harsh operating environments. Metalphoto's proprietary technology permanently seals a UV-stable image inside of anodized aluminum, offering the confidence of unparalleled durability, image resolution and readability.

Metalphoto can be imaged at your location where and when needed or purchased from a worldwide network of approved suppliers. Contact Horizons Imaging Systems Group for assistance developing your material specifications.

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+ years outdoor applications.
- Earned more top scores than any other 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.
- Notable certifications include: MIL-STD-130N, STANAG 2290, GGP-455B, MIL-DTL-15024F, MIL-P-19834B and A-A-50271 (several others listed on metalphoto.com).

Always Readable:

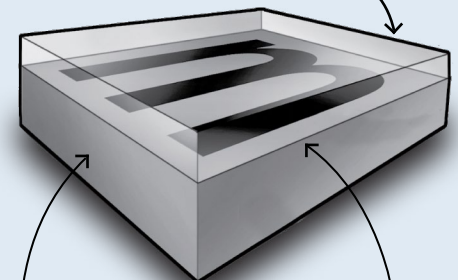
- Photographic images afford extreme detail and contrast at any size.
- Anti-counterfeit security printing is available.

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Cross-section

Anodic Layer

The glass-clear, sapphire-hard anodized layer resists chemicals, paint, abrasion and dirt.



Sealed Image

Black graphics are metallic silver particles that hold to extreme heat and sunlight exposure.

Aluminum Layer

The rigid aluminum base will not peel, crack or delaminate.

**When durability matters,
choose Metalphoto.**

HorizonsIncorporated
ISG Imaging Systems Group

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Product Specifications

Applications:

- Bar Code Labels
- Long-Term Asset Tags
- Machine Panel Fronts
- Nameplates/Data Plates
- Equipment Labels
- Name Badges
- Plaques & Awards
- Aircraft Data Plates, Placards and Panel Fronts
- Energy/Mining Compliance Tags
- Shipping/Transportation Labels
- Architectural/Wayfinding Signage
- Diagrams & Schematics
- Photographic Reproductions
- Anti-Counterfeit Security Labels

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

Specifications:

Material: anodized aluminum sheets (1100 alloy)

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"

Metalphoto Performance Characteristics:

Meets many DoD requirements including MIL-STD-130N, GGP-455B, MIL-A-8625F and MIL-DTL-15024F.

Characteristic	Result
Abrasion Resistance	No pronounced image loss, degradation or reduced readability after 7,000 cycles on an abrading wheel.
Acid Corrosion	No deterioration or image degradation after 24 hours in 3% nitric acid.
Heat Resistance	No legibility loss or degradation when subjected to 1,000°F.
Salt Spray Corrosion	No deleterious effect after a 720-hr salt spray (fog) test. 2,6 "Very Good" corrosion resistance after 113 days seawater exposure.
Accelerated Light and Weather Resistance	No pronounced deterioration of legibility after 400-hr carbon arc weatherometer exposure. (Estimated 20+ year outdoor life)
Accelerated Oxygen Aging	No discoloration or fading after 96-hr/300 psi/ 70°C oxygen bomb aging
Stain Resistance	No black fading when plates are exposed to tincture of iodine.
Cleaning Resistance	No deleterious effects when tested with alkaline cleaners (MILC-87937 or equivalent) for aircraft surfaces.
Low Temperature Resistance	No deleterious effect or image fade after 1 hour at -50°F. No impairment of legibility upon exposure at -67°F.
Organic Solvent Resistance	No softening, staining or noticeable fade after 24-hr exposure to: JP-4 fuel, Gasoline, Mineral Spirits, Methyl Ethyl Ketone, Turpentine, Turbine & Jet Fuel, Kerosene, Xylol, Acetone, Toluol, Heptane, Trichlorethylene, MIL-H-5606 Hydraulic Fluid and MIL-L-7808 Jet Engine Oil.
Fungus Resistance	Visual reading of "0" per ASTM-G21.
Thermal Shock	No deterioration after 3 cycles between -65°C and 125°C
Moisture Resistance	No deterioration after 10 humidity cycles per MIL-STD-202, method 106.

How To Order:

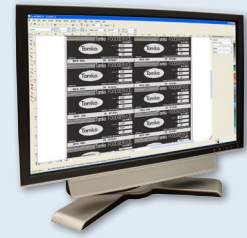
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Horizons ISG does not warrant performance of its materials in any environment.

The Metalphoto Process



1. Design graphics



2. Print the negative image on paper or film



3. Expose Metalphoto sheet through the negative



4. Develop/fix/rinse



5. Seal image into aluminum



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