## metalphoto®

# MARINE









# ANODIZED LAYER The glass-clear, sapphire-hard anodized layer resists chemicals, paint, abrasion and dirt. SEALED IMAGE The rigid aluminum base won't peel, crack or delaminate. SEALED IMAGE The image is absorbed into the pores.



# 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 barcode readability.

First specified by the United States Navy in 1958, Metalphoto has been performing in demanding marine applications for over 50 years. Metalphoto's performance in marine applications is due to its unique combination of resistance to saltwater corrosion, UV/sunlight degradation, abrasion and many solvents. Metalphoto's industrial marine resume includes asset tags on workboats, shipping container nameplates and control panels on off-shore marine cranes.

Metalphoto can be produced at your location where and when needed or purchased from worldwide network of approved suppliers. Contact Horizons Imaging Systems Group to get Metalphoto specified into your designs.

#### 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 applications.
- + 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.
- + Notable certifications include: MIL-STD-130N, STANAG 2290, GGP-455B(3) Type I, MIL-DTL-15024F, MIL-P-19834B and A-A-50271 (several others listed on metalphoto.com).

#### **PHOTOGRAPHIC RESOLUTION:**

- + Photographic image affords extreme detail and contrast at any size.
- + Anti-counterfeit security printing is available.

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### PRODUCT SPECIFICATIONS

#### PERFORMANCE CHARACTERISTICS

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** for a list of specifications for which Metalphoto is qualified.

| 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                          | 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.   |
| 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. ( ≈ 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:<br>JP-4 fuel, Gasoline, Mineral Spirits, Methyl Ethyl Ketone, Turpentine, Turbine & Jet Fuel, Kerosene, Xylol, Acetone, Toluol, Heptane,<br>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.   |

#### 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).

#### 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

TO ORDER
Call 1-800-482-7758 or visit our website at Metalphoto.com

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

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