

# Permanent Metal Markings for Bar Codes, Data Plates, Control Panels and Foil Labels

20 Years Outdoor Durable  
Resistant to Sunlight, Wind, Water and Saltwater  
Withstands Chemicals, Fire, Rust and Abrasion

metalphoto®  
is specified & used by

## UID

**DoD**  
Mil-Std-130M  
GG-P-455B  
Mil-A-8625F  
Mil-DTL-15024  
SPEC 2000  
Lockheed Martin LMA-PN010

## Industry Specifications & Studies

**BF Goodrich Aerospace**  
Data Systems Division  
Specification SMT0022

**Boeing Commercial Aircraft Company**  
Boeing Process Specification BAC5875  
Fabrication of Aluminum Markers, Instrument  
Panels, Drawer Front Panels and Fabrication of  
Metal and Plastic Appliques

**Honeywell, Inc.**  
Satellite Systems Operations  
Metalphoto approved for use on Space Station  
Memorandum A3-J024-M-9501786  
Laboratory Case 161311

**Norwegian Marine Technology**  
Research Institute (Marintek)  
Corrosion test of anodized aluminum plates  
23.1011.00.0391

**SAE Technical Paper Series 2000-01-2437**  
Special requirements for Crew Interface Labels  
on the International Space Station  
Stephen Gray & Fernando Ramos - Boeing

## UL & CSA

**Canadian Standard Association (CSA)**  
File 111331, Class 7921

**Underwriter Laboratories**  
Marking and Labeling Systems PGDQ2  
Marking and Labeling System Material  
Component PGGU2.MH26206

## U.S. Government Specifications & Studies

**Department of Defense**  
Commercial Item Description  
A-A-50271 Class 2- Composition C

**Department of Defense**  
MIL-A-8625F  
Anodic Coatings for Aluminum & Aluminum  
Alloys  
Type II Class 1 (unprocessed or clear)  
Class 2 (processed)

**Departments of Defense**  
MIL-STD-13231  
Standard Practice  
Marking of Electronic Items

**Department of Defense**  
MIL-DTL-15024F  
Identification of Equipment  
Type G - Foil - Type H - Plate

**Department of Defense**  
MIL-STD-130L  
Identification Marking of U.S. Military Property

**Department of Defense**  
MIL-P-19834B  
General Specification for Plates  
Identification or Instruction, Metal Foil,  
Adhesive Backed

**Department of Navy**  
Laboratory evaluation of label plate materials  
and attachment methods considered for use  
on LPD-17  
CARDIVNSWC-TR-62-00-05 June 2000

**NASA, Johnson Space Center Texas**  
Space Station Inventory Label Specification -  
SSP 50007

**United State Federal Government**  
Federal Specification GGP-455B(3)  
Type I (Grade A&B) Class 1 or 2

## metalphoto® Performance Characteristics

Characteristic	Result
Abrasion Resistance	No pronounced image loss, degradation, or reduced readability after 7000 cycles of 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 1000°F.
Salt Spray Corrosion	No deleterious effect after a 720-hour 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-hour carbon arc weatherometer exposure.
Accelerated Oxygen Aging	No discoloration or fading after 96hour/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 (MIL-C-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-hour 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.



**NORTHROP GRUMMAN**



**LOCKHEED MARTIN**

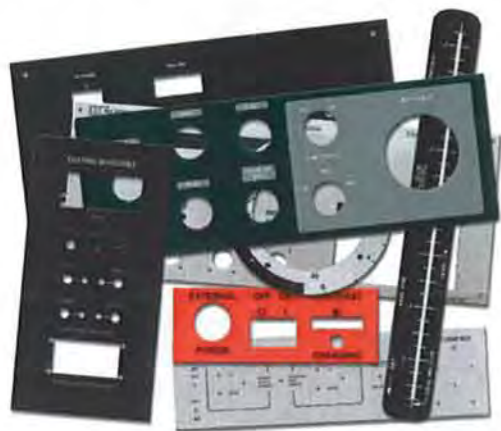
**Bath Iron Works**  
A GENERAL DYNAMICS COMPANY



...and many more companies,  
large and small

## Panels & Dials

Available in thicknesses to .125"  
In matte, satin or #4 brushed finish  
Resists most chemicals and solvents



## Data Plates/Schematics

Ideal for detailed schematics or data plates  
Resistant to abrasion, heat and corrosion



## Bar Code Labels

Meets UID requirements of MIL-STD-130  
Labels won't fade, scratch or delaminate



## Shipboard Markings

Metalphoto was first used in 1958  
Recent Navy study: "Metalphoto label plates  
provide the highest degree of performance."



## Torture This!

Metalphoto anodized aluminum nameplates and panels are practically indestructible. Graphics are permanently embedded in the aluminum and are resistant to the following harsh conditions:

**Extreme ultraviolet exposure**

**Temperatures exceeding 700°**

**Salt spray**

**Gasoline, jet fuels, hydraulic fluids, chemicals and solvents**

**Abrasion**

**All-Marks**

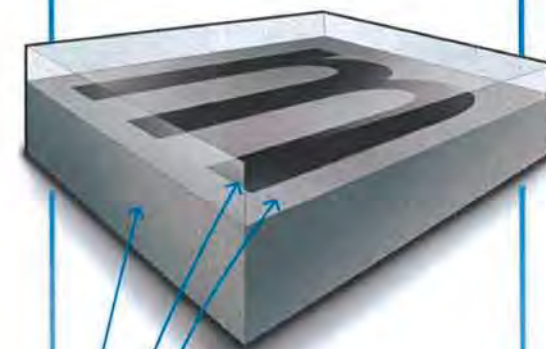
**800.784.5816 / 818.704.9700  
to discuss your specific application**

**metalphoto®**

**Metalphoto will measure up to  
your toughest requirements.**

## Specify metalphoto®

Metalphoto is the preferred material for nameplates, control panels and bar codes in applications where service life expectations exceed 20 years for the part. Government & aerospace extensively specify Metalphoto for demanding applications that require resistance to the effects of weather, abrasion, heat and most chemicals. The following performance requirements are taken from reference documents, in which Metalphoto is used and specified, in order to demonstrate the unique durability of the product.



**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 up to extreme heat and sunlight exposure.

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