



Durable Bar Code Solutions

www.camcode.com

## Product: Metalphoto Foil UID Label



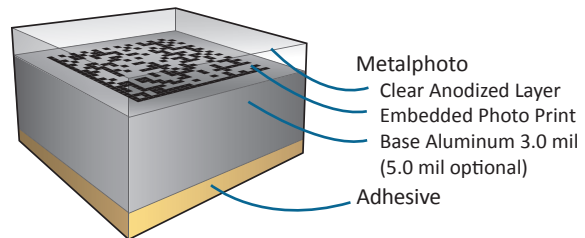
### Product Features

- Metalphoto® is the most specified label material in history for DoD applications, and the best choice for MIL-STD-130 applications requiring durable UID labels.
- Flexible foil thickness works well on curved or uneven surfaces.
- Photographic quality black and silver graphics are high contrast with excellent resolution.
- High-performance 5.0 mil 3M application adhesive.
- All Camcode UID labels are verified to the required print quality standards. Registration service is also available.

## Need a UID Label with Exceptional Durability?

### Description

Camcode's **Metalphoto® Foil UID** label is designed with superior quality for the most demanding label applications. Flexible foil thickness works well on curved or uneven surfaces. This label is constructed of a 3.0 mil anodized aluminum face stock (5.0 mil optional) with a high performance adhesive designed to permanently bond to metals and low surface energy (LSE) materials. The label has excellent resistance to chemicals, abrasion, solvents; and will withstand exterior exposure in the harshest environments, including extreme cold, heat and UV. When treated with our image intensification process, Metalphoto's expected exterior life exceeds 20 years.



### Product Specifications

- Material** 3.0 mil anodized aluminum face stock (5.0 mil optional).
- Adhesive** 5.0 mil high performance adhesive bonds to most surfaces.
- Label Copy** Several font types are available as well as logos or other design elements.
- Symbologies** All common symbologies available including code 3 of 9, 12 of 5, 128 and Data matrix.
- Colors** Black and silver graphics; color options available.
- Standard Sizes** Standard and custom sizes available.
- Packaging** Shipped in sequential order, on sheets, in boxes. 100% no missing numbers.
- Shipment** 15 working days from receipt of order and approval of artwork. Expedited shipment is available for an additional charge.

# Metalphoto®

## Durability Characteristics

PRODUCT DATA	VALUE	TEST METHOD
Exterior Exposure	No Effect	Using Metalphoto Image Instensification Process, black and silver image exceeds 400 hr. Weatherometer est GG-P-455b, estimated equivalent to 20 yr. exposure
Abrasion Resistance	Slight dulling of surface	Taber Abraser with CS17 wheel, a total of 1000 gm. load 7000 cycles
Temperature Resistance	650°F	Using Metalphoto Image Instensification Process
Salt Spray	No Corrosion	5% at 95°F for 700 hrs.
<b>Chemical Resistance</b>		
MIL-S-3136 111 Hydrocarbon Fluid	No Effect	1 hr. immersion
MIL-L-5161C-Turbine and jet engine fuel	No Effect	1 hr. immersion
JP-4 Fuel	No Effect	72 hr. immersion
Kerosene	No Effect	12 hr. immersion
Skydrol (Hydraulic Fluid)	No Effect	24 hr. immersion at both room temp. and boiling point
Methyl Ethyl Ketone (MEK)	No Effect	24 hr. immersion
Ethyl Acetate	No Effect	24 hr. immersion
Xylol	No Effect	72 hr. immersion
Heptane	No Effect	72 hr. immersion
Ethyl Alcohol	No Effect	72 hr. immersion
Ferric Chloride	No Effect	10% solution, 16 hr. immersion
Ammonium Hydroxide	Slight Dulling	10% solution, 16 hr. immersion
MIL-P-21563 soap solution	No Effect	16 hr. immersion
MIL-C-25179 AIN in heptane	No Effect	25% solution, 1 min. immersion (cleaning solution)
Sulfuric Acid	No Effect	10% solution, 24 hr. immersion
Phosphoric Acid	No Effect	1% solution, 12 hr. immersion
Nitric Acid	No Effect	3% solution, 72 hr. immersion
TSP (Trisodium Phosphate)	No Effect	1% solution, 40 hr. immersion
Sodium Hydroxide	Not Recommended ( <i>surface attack</i> )	1% solution, 1 hr. immersion

SPECIFICATION	PUBLICATION	DETAIL	DESCRIPTION
GG-P-455b	Federal Specification	Type I, Grade A or B Class 1 & 2	Photosensitive anodized aluminum impregnated w/ silver compounds printable on one or two sides - all finishes and thicknesses.
MIL-P-15024D	Military Specification	Type H & G	Totally anodized aluminum with characters integrated into the anodized layer photographically using silver compounds.
MIL-P-19834B	Military Specification	Type I or II Style III or IV	Metalphoto .003" thick plates with the proper adhesive applied meets or exceeds all of the performance requirements of this spec.
MIL-P-514D	Military Specification	Composition C	Photosensitive aluminum plates, grade and class as specified in federal specification GG-P-455b.
Industrial Commercial Products	Original Equipment Panel Fronts Nameplates	Metalphoto Products	Material shall be Metalphoto. Image (black on silver or silver on black shall be sealed into the anodized layer with photosensitive silver compounds) colors other than black may be imbedded by resist or screen process.

PRODUCT DATA (ADHESIVE ONLY)	VALUE	TEST METHOD
<b>Physical Properties</b>		
Thickness (mils[microns])	Film: 0.003" (0.076mm) +/- 10% Adhesive: 0.005" (0.127mm) +/- 10% Liner: 0.0062" (0.158mm) +/- 10%	ASTM D 3652
<b>Chemical Resistance</b>		
	See MP durability characteristics	
<b>Adhesive Properties - 180 degree peel at 72°F (22°C)</b>		
		ASTM D3330 (modified for 72 hour dwell time)
<b>Surface</b>	<b>Oz/In</b>	<b>(N/100mm)</b>
Stainless Steel	150	(164)
Aluminum	95	(104)
Painted Metal	145	(158)
Glass	145	(158)
Polycarbonate	145	(158)
Acrylic	125	(136)
Epoxy	120	(131)
ABS	85	(93)
Rigid PVC	90	(98)
Polypropylene	80	(87)
L.D. Polyethylene	40	(44)
H.D. Polyethylene	35	(38)
Expected Exterior Life	20 years	
Service Temperature Range	-40°F to 350°F (-40°C to 177°C)	
Minimum Application Temperature	50°F (10°C) on most surfaces	
Storage Stability	One year at 70°F and 50% RH.	

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Note: Users must test products in the specific environment anticipated.

Camcode does not warrant performance of its materials in any environment.



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