

Photo Anodized Aluminum (Metalphoto®) Testing & Technical Specifications

SPECIFIC CHARACTERISTIC	TEST CONDITION	EFFECT
Exterior Exposure	Black and silver image exceeds 400 hr. Weatherometer Test GG-P-455b, estimated equivalent to 20 yr. exposure	No effect
Abrasion Resistance	Taber Abraser with CS17 wheel, 1000 gm. load, 7000 cycles	Slight dulling of surface
Temperature Resistance	Black and silver image, intensified, 1000° F Black and silver image, standard, 750° F	Slight dulling Slight dulling
Salt Spray	5% at 95° F for 700 hrs.	No corrosion
Chemical Resistance		
MIL-S-3136 III Hydrocarbon Fluid	1 hr. immersion	No effect
MIL-L-5161C-Turbine and jet engine fuel	1 hr. immersion	No effect
JP-4 fuel	72 hr. immersion	No effect
Kerosene	12 hr. immersion	No effect
Skydrol (Hydraulic Fluid)	24 hr. immersion, at both room temperature and boiling point	No effect
Methyl Ethyl Ketone (MEK)	24 hr. immersion	No effect
Ethyl Acetate	24 hr. immersion	No effect
Xylol	72 hr. immersion	No effect
Heptane	72 hr. immersion	No effect
Ethyl Alcohol	72 hr. immersion	No effect
Ferric Chloride	10% solution, 16 hr. immersion	No effect
Ammonium Hydroxide	10% solution, 16 hr. immersion	Slight dulling
MIL-P-21563 soap solution	16 hr. immersion	No effect
MIL-C-25179AIN in heptane	25% solution, 1 min. immersion (cleaning solution)	No effect
Sulfuric Acid	10% solution, 24 hr. immersion	No effect
Phosphoric Acid	1% solution, 12 hr. immersion	No effect

Nitric Acid	3% solution, 72 hr. immersion	No effect
TSP (Trisodium Phosphate)	1% solution, 40 hr. immersion	No effect

METALPHOTO PRODUCT SPECIFICATIONS

SPECIFICATION	PUBLICATION	DETAIL	DESCRIPTION
GG-P-455b	Federal Specification	Type I, Grade A or B Classes 1 & 2	Photosensitive anodized aluminum impregnated with 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-514D	Military Specification	Composition C	Photosensitive aluminum plates, grade and class as specified in federal specification GGP-455b.
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 the performance requirements of this spec.
MIL-P-6906B	Military Specification	Para. 3.2.6 Type I or II	Photosensitive aluminum plates, grade and class as specified in federal specification GGP-455b.
MIL-N-18307F	Military Specification	Type H	Same as MIL-P-15024D
MIL-M-13231A	Military Specification	-	Photographically printed aluminum plate with a minimum thickness of .020".
MIL-A-8625-C	Military Specification	Type II	Performance characteristics of Metalphoto materials meet or exceed the performance characteristics of materials mfg'd under this spec.
Industrial-Commercial Products	Original Equipment Panel Front Nameplates	Metalphoto products	Material shall be (specify thickness and finish). 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.

Test results provided by Horizons, Inc.