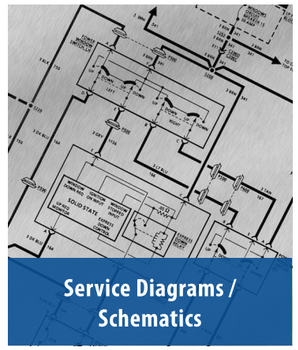
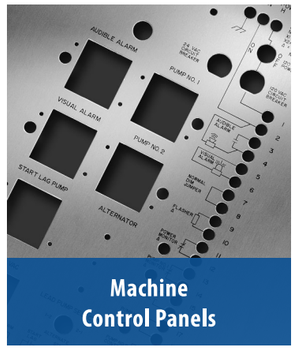
metalphoto®

MINING

Nameplates / Barcode Labels

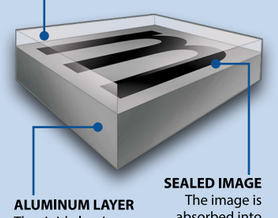


Service Diagrams / Schematics



Machine Control Panels

THE TECHNOLOGY



- UV STABLE
- ABRASION RESISTANT
- TEMPERATURE RESISTANT
- FLUID RESISTANT
- RECYCLABLE

Exceptionally Durable. Widely Specified. HIGH Resolution Graphics.

Used for over 15 years on Caterpillar (Bucyrus) mining equipment, Metalphoto is engineered to withstand the demanding conditions of surface and sub-surface mining. Metalphoto photosensitive anodized aluminum is approved for mining identification applications including approval plates (MSHA Title 30, Part 18.11), on-equipment schematics/diagrams (MSHA Title 30, Part 70.310), machine control panels and several other applications. Durable Metalphoto identification products support MSHA compliance, enable fast and proper equipment repairs and improve operator efficiency.

For over 50 years industrial and military engineers have specified Metalphoto photosensitive anodized aluminum because of its ability to withstand 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 produced at your location where and when needed or purchased from a 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).

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

U.S. NAMEPLATE CO.

HWY 30 WEST
MT. VERNON, IA 52314 USA

T: 1(800)553-8871
F: 1(319)895-8635

E: sales@usnameplate.com
usnameplate.com

metalphoto®

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	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. (≈ 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.

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

TO ORDER
Call 1-800-553-8871 or visit our website at usnameplate.com

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

Ver. 1.0 NOV 2011

U.S. NAMEPLATE CO.

HWY 30 WEST
MT. VERNON, IA 52314 USA

T: 1(800)553-8871
F: 1(319)895-8635

E: sales@usnameplate.com
usnameplate.com