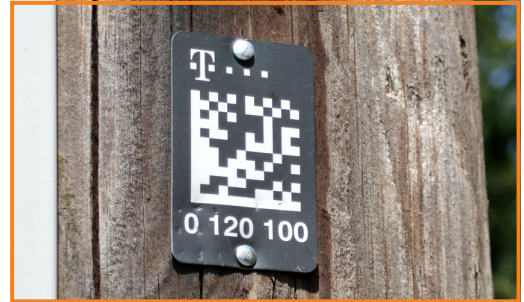


Metal-Label



Label characteristics

Material	1100 Series Alloy H14 to H19 temper, anodized aluminium. Thicknesses of .003, .005, .008, .012, .020, .032, .063, .125. Black and silver images sealed within the anodic layer.
Abrasion Resistance	Over 7000 cycles with tabor abraser with Cs17 wheel, 1000 gramm load results in no pronounced loss of readability.
Heat Resistance	Standard SO354® material shows no pronounced loss of readability when exposed to temperatures up to 340°C. Extra high temperature material (SO354 XHT) shows no pronounced loss of readability when exposed to temperatures up to 640°C.
Exterior Exposure	Weatherometer tests indicate no loss of readability after 400 hours of accelerated testing (estimate equivalent 20 years). This means users may expect years of outdoor exposure without affecting barcode readability.
Chemical Resistance	Most chemicals have no effect on readability. Strong acids or alkalis may have degrading effects. Teflon treatments available for applications requiring paint shedding and/or resistance to strong acids or alkalis.
Solvent Resistance	Solvents have no effect on readability.
Symbolologies	All common symbolologies available including code 3 of 9, 2 of 5, 128 and Datamatrix.

Adhesive characteristics

Adhesive	Modified acrylic adhesive -A25-
Liner	Without
Colour	Transparent
Thickness as per ASTM-D3652	0.135 mm
Protective cover	Tear-proof, double-sided siliconized paper
Schälkraft auf Stahl	163 N / 100 mm
Temperature range	-40 to +150°C (permanent) to +230°C (temporary)
Resistance	UV resistance very well Solvent resistance very well
Storage	12 months at 50 % rel. humidity and ca. 20°C storage temperature

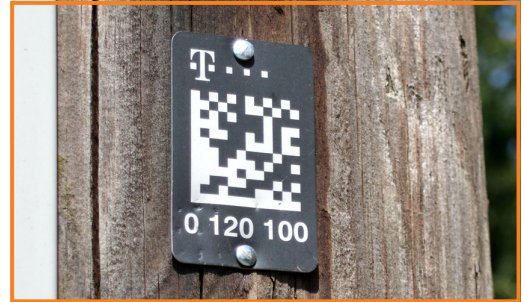
Special features

- Withstand abrasion, intense temperatures and weather conditions and exposure to UV, chemicals and solvents.
- Proven to integrate easily with leading asset management systems
- Labels exist with or without adhesive

- Subject to change without notice -

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Metal-Label



Durability characteristics

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, a total of 1000 gm. load, 7000 cycles	Slight dulling of surface
Temperature Resistance		650°F
Salt Spray	5% at 95°F for 700 hrs.	No corrosion
Chemical Resistance		
MII-S-3136 111 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-25179 AIN 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
Sodium Hydroxide	1% solution, 1 hr. immersion	Not recommended (surface attack)

- Subject to change without notice -

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