

Universal RFID Asset Tag



The closest thing you will find to a “one-size-fits-all” RFID solution!

The Universal RFID Asset Tag is a surface-independent tag that uses a patented inlay design and passive RFID technology to obtain excellent read ranges regardless of the surface – metal, plastic, even wood. Along with the Universal RFID Hard Tag, these two products make up a revolutionary product line that allows you to use only one RFID tag for your asset tracking application.

The Universal RFID Asset Tag features an inlay design that offers the lowest profile of any tag in its class – solving a common issue many customers have with other metal mount RFID tags where a thick standoff creates an obtrusive nuisance for the user.

This unique inlay adheres to a subsurface printed label constructed of durable, yet flexible polyester. This process protects the copy, logo and/or bar code against moderate solvents and caustics/acids while our four-color processing capabilities allow you to promote your company with a label that shows off our company name or logo. Metalcraft’s digital printing process ensures even the most detailed logos will look crisp and clean.

Key Product Features

- Patented inlay design obtains excellent read range regard less of surface – metal, plastic, even wood
- Lowest profile in its class makes label unobtrusive
- Subsurface printing on durable polyester protects printed copy against moderate solvents and caustics/acids
- Digital printing process provides for greater print capability with detailed logos or special designs
- Choice of up to four standard or custom colors

Not sure what product you need?

Call our trained Experts!

800-437-5283



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Universal RFID Asset Tag Specifications

Construction: .002" thick polyester label adhered to proprietary inlay wrapped around 1/16" closed cell foam. Total product thickness is approximately .085"

Label Copy: The label copy may include block type, stylized type, logos or other designs. All copy, block type, stylized type, logos, designs, and bar code are subsurface printed. This unique process provides moderate resistance to solvents, caustics, acids and abrasion.

Colors: Standard colors include black, red, yellow, green and blue. Due to contrast needed for the bar code scanner, all bar codes are black.

Serialization: Bar code and human-readable equivalent are produced using the latest high-resolution digital technology available, which provides excellent clarity and easy scanning. Code 39 is the standard symbology with a range of 2.7 to 5.4 CPI (characters per inch). Optional symbology is Code 128.



Programming: The bar code and human readable can be programmed into the RFID inlay as long as the information is in decimal or hexadecimal format. Metalcraft can encode up to 24 characters into the RFID inlay. If desired, Metalcraft can encode information that differs from the bar code and human readable.

Locking: All Universal RFID tags are password locked. The password can be designated by Metalcraft, or, if desired, the customer can designate their own specific password.

Frequency: Custom designed UHF inlay uses Alien Higgs 3 chip optimized for use at 915 MHz.

Standard Sizes: 2 7/8" x 1 3/8"

Standard Adhesive: Pressure-sensitive acrylic (MC778), .002" thick supported by a liner. Very high peel strength that provides excellent resistance to heat and chemicals. Withstands temperatures from -40°F to 300°F (intermittent). Shelf life of 24 months when stored at 72°F (22°C) and 50% relative humidity.

Shipment: Approximately 20-25 work days depending on order quantity and inlay availability.

To Order: Call **1-800-437-5283** and ask for an ID Specialist

Test Results

These tests were conducted for a limited period of time in strict laboratory conditions. In order to achieve maximum satisfaction we highly recommend that any customer considering use of this product test the labels in the environment in which they will be used.

Heat Testing - Product withstood temperatures up to 240°F (115°C) for short term (10 minute) periods. They will withstand temperatures up to 160°F (71°C) for extended periods (tested for six hours with no degradation). The tests demonstrated that the transponder was not readable at temperatures above 185°F (85°C), but resumed function when temperatures were once again reduced below 185°F (85°C).

Cold Testing - Tags were tested outdoors at 0°F and were readable, but read distance was reduced to half of the read distance observed at 60°F (15°C).

Length of Immersion	Water	Glass Cleaner	Bathroom Cleaner pH 10.0	Isop. Alcohol 99%	Acetone 100%	NaOH pH 12.0	HNO ₃ pH 1.0	HCl pH 1.0	Brake Fluid
2 Hours	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.
24 Hours	N.E.	N.E.	N.E.	N.E.	When pulled, tags came apart	N.E.	N.E.	N.E.	N.E.
1 Week	N.E.	N.E.	N.E.	P.S. Adhesive softened	When pulled, tags came apart	When pulled, tags came apart	N.E.	N.E.	N.E.
3 Weeks	N.E.	N.E.	N.E.	When pulled, tags came apart	When pulled, tags came	When pulled, tags came apart	N.E.	N.E.	N.E.

N.E. = No Effect

* = In all cases, after 3 weeks soaking in these chemicals, all the tags and labels responded properly when interrogated with a handheld RFID reader, and all the bar codes except those soaked in acetone were readable with a standard bar code reader.

Read Range Test - In many cases the tags read intermittently for longer distances than those indicated, however, the results reported below were for continuously responding reads.

Device Used	Test Results (all at 30 dBm)			
Handheld Convergence CS-101 Universal RFID Asset Tag	METAL 27.5 feet	PLASTIC 20 feet	CARDBOARD 15 feet	WOOD 15 feet



Want to see the Universal RFID Tag in action? Download QR code reader app to your smart phone and scan this bar code to view the Metalcraft Universal RFID Asset Tag video.