Universal RFID Hard Tag

An RFID tag that truly lives up to its name

The **Universal RFID Hard Tag** features surface independent tags with a *patented inlay* design used to gather excellent reading ranges regardless of the surface including metal, plastic and even wood. Along with the **Universal RFID Asset Tag**, these two products make up a revolutionary line of products that allows you to use just one RFID tag for your asset tracking application.
The **Universal RFID Hard Tag** features impact resistant casing combined with an ultrasonically welded seal that protects the subsurface printed label and RFID inlay from harsh environments such as harmful UV rays. This durable product also withstands heavy impact and will read after resurfacing from submersion in over 6 metres (20 feet) of water. The casing comes standard with two holes for mechanical fasteners; however, permanent pressure sensitive adhesive is also available as an optional affixing method. Unlike other RFID hard tags on the market, the **Universal RFID Hard Tag's** clear casing allows customers to see the customised label inside. Our four-color processing capabilities allow you to promote your company with a label that shows off your company name or logo. In addition, our digital printing process ensures even the most detailed logo will look crisp and clean.

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 115°C (240°F) for short term (10 minute) periods. They will withstand temperatures up to 71°C (160°F) for extended periods (tested for six hours with no degradation). The tests demonstrated that when the transponder was not readable at temperatures above 85°C (185°F), but resumed function when temperatures were once again reduced below 85°C (185°F).
Cold Testing - Tags were tested outdoors at 0°C and were readable, but read distance was reduced to half of the read distance observed at 15°C (60°F).

Length of Immersion	Water	Glass Cleaner	Bathroom Cleaner pH 10.0	Isop. Alcohol 99%	Acetone 100%	NaOH pH 12.0	HNO3 pH 1.0	HCl pH 1.0	Brake Fluid
2 Hours	N.E.	N.E.	N.E.	N.E.	Surface of housing slightly cloudy	N.E.	N.E.	N.E.	N.E.
24 Hours	N.E.	N.E.	N.E.	N.E.	Plastic housing softened, but RFID tag still readable*	N.E.	N.E.	N.E.	N.E.
1 Week	N.E.	N.E.	N.E.	P.S. Adhesive softened	Plastic housing brittle, opaque, but RFID tag still readable*	N.E.	N.E.	N.E.	N.E.
3 Weeks	N.E.	N.E.	N.E.	P.S. Adhesive softened	Plastic housing softened, but RFID tag still readable*	N.E.	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. NOTE: Samples tested with adhesive.

Device Used	Test Results (all at 30 dBm)			
Handheld Convergence CS-101 Universal RFID Hard Tag	METAL 3 metres (10 feet)	PLASTIC 1.5 metres (5 feet)	CARDBOARD 1.5 metres (5 feet)	WOOD 1.5 metres (5 feet)

SPECIFICATIONS	
Construction	0.05 mm (0.002") thick polyester label adhered to proprietary inlay wrapped around 0.06 mm (1/16") closed cell foam encased in impact resistant polycarbonate housing.
Label Copy	The label copy may include block type, stylised type, logos or other designs. All copy, block type, stylised type, logos, designs, and bar code are subsurface printed. This unique process provides excellent resistance to solvents, caustics, acids and moderate abrasion.
Colours	Standard colours include black, red, yellow, green and blue. All bar codes are imaged in black only due to contrast needed for the bar code scanner black.
Serialisation	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 and *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. We can encode up to 24 characters into the RFID inlay. If desired, We can encode information that differs from the bar code and human readable.
Locking	All Universal RFID tags are password locked. The pass word can be designated by us, or, if desired, the customer can designate their own specific password.
Frequency	Custom designed UHF inlay uses Alien Higgs 3 chip optimised for use at 915 MHz.
Standard Sizes	4 1/8" x 1 3/4"
Standard Adhesive	Mechanical fasteners (standard) and/or permanent pressure sensitive adhesive (optional)

- **Patented inlay design obtains excellent read range regardless of surface – metal, plastic and even wood**
- **Impact resistant housing protects RFID inlay from harmful UV rays**
- **Ultrasonically welded seal protects RFID inlay from 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**
- **Affixing methods include mechanical fasteners (standard) and/or adhesive (optional)**

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.

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Our Innovation - Your Edge™

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