

# Universal Mini RFID Tag



The only thing "mini" about this tag is its size!

With a smaller footprint and lower profile than the original Universal RFID Asset Tag, the Universal Mini RFID Asset Tag easily fits in smaller places and on assets where other tags may be too large. Developed using the same premise as our original Universal RFID Asset Tag, the smaller tag utilizes a patented inlay design and passive RFID technology to obtain incredible read ranges on a variety of different materials - metal, plastic, even wood. And customer programming matches the printed bar code information for two tracking technologies.

## Features

Smaller footprint and lower profile while still achieving excellent read range sets this product apart from others  
Patented inlay design obtains excellent read ranges regardless of surface – metal, plastic, even wood  
Subsurface printing on durable polyester protects printed copy against moderate solvents and caustics/acids

## Product Print Options

Barcode . Data Matrix . QR Code . RFID . Serial Number . Text

## Product Functionality

Abrasion Resistance . Chemical Resistance . Heat Resistance

## Popular Applications

Inventory . Manufacturing . Restoration . Theater . Theme parks . Wineries / Breweries . Hospitals . IT Assets . Manufacturing . Schools

## Category

On Metal RFID . RFID Tags . Universal RFID

## Specifications Data

<b>Material</b>	<b>Inlay wrapped around 1/32" closed cell foam. Total thickness .047".</b>
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.
Label Copy	The label copy may include block type, stylized type, logos or other designs
Colors	Standard colors include black, red, yellow, green, dark blue, orange, purple or blue. Custom spot colors are also available at no additional charge. Due to contrast needed for the bar code scanner, all bar codes are black.
Standard Adhesive	Pressure-sensitive acrylic adhesive
Frequency Range	Custom designed UHF inlay uses Alien Higgs 3 chip or Impinj R6P chip optimized for use between 902-928 MHz.
Sizes	2.75" x .75"
Packaging	Produced and shipped in roll form.
Shipment	14 business days

## Chemical Testing

The Universal Mini tags were attached to a sheet of glass submerged in various chemicals for a 3 week period. Observations were made at the following intervals: 2 hours, 24 hours, 1 week, 2 weeks, and 3 weeks. A Motorola handheld RFID reader as well as a handheld barcode reader were used to test the samples.

### Chemical Test Data

Length of immersion	Water	Glass cleaner	Bathroom Cleaner	Isopropyl alcohol 99%	Acetone	NaOH pH 12.0	HCl pH 1.0	Brake Fluid
2 hours	no effect	no effect	no effect	no effect	no effect	no effect	no effect	no effect
24 hours	no effect	no effect	no effect	no effect	no effect	no effect	no effect	no effect
1 week	no effect	no effect	RFID tag read with difficulty (significantly lower hits/second)	no read	Tag structure weakened	Tag detached	no effect	no effect
2 weeks	no effect	RFID tag read with difficulty (significantly lower hits/second)	RFID tag read with difficulty (significantly lower hits/second)	no read	no read	tag detached	no read	no effect
3 weeks	tag peeled easily	tag peeled easily	no read; tag peeled easily	no read; tag peeled easily	no read	tag detached	no read; tag peeled easily	no effect

## Temperature Testing

High-temperature resistance test - These tags were attached to a sheet of glass at raised temperatures for 10 minutes. Tags were then removed from the oven and tested for readability immediately. Low-temperature resistance test - The Universal Mini tags were attached to a sheet of glass at low temperatures outdoors. Tags were then checked for readability with a Motorola handheld RFID reader. Tags survived and were readable for 19 hours in Iowa winter conditions with temperatures between -21 to -26°F with no signs of failure.

### Temperature Test Data

Temperature	RFID read test (immediately out of oven)	Appearance of tags
125°F	Reads well	No change
135°F	Reads well	No change
145°F	Reads well	No change
165°F	Reads well	Slight curling at edge
185°F	Reads well	Slight curling at edge
205°F	Reads well	Slight curling at edge
225°F	Reads well	Severe curling at edge - tag discolored
250°F	Test failed	Tag destroyed

## Read Range Testing

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

### Read Range Test Data

#### Universal Mini Anechoic Chamber Results

Sample	Metal	Plastic	Cardboard	Wood	Glass
Average	13.47 feet	6.8 feet	6 feet	9.67 feet	13.33 feet