

Small / Customizable / 100% Made in France UHF RFID Tag for Textile

The **FenoTEX-1136-R6P** is a new Woven RFID label for Flat Linen, Garments, Pillowcases etc. Each FenoTEX-1136-R6P has been specifically designed for tracking textile inventory throughout the harsh environment of the laundry industry. Tags are manufactured with an enhanced shape, robustness and ease of application with an extremely long-range RFID read performance. The **FenoTEX-1136-R6P** is based on a unique and patented concept. It uses a very small UHF device coupled to an embedded secondary antenna made of an innovative, flexible thread.

The **FenoTEX-1136-R6P** is easily affixed to textile products by inserting them into the hem. The **FenoTEX-1136-R6P** withstands heat-sealing processes and can be attached to textiles using its own adhesive delivered as standard issue.

EPC Global and ISO 18000-6C compliant UHF tags.



Design & Product overview:



- Overall thickness:
 - < 0.5mm,
 - except on chip area < 2.5mm
- Weight: ~0,35g
- Serial number can be engraved by laser
- Custom dimension on request
- Logo printable on tag
- Fixing method:
 - inserted into the Hem
 - affix by heat-sealing

Environmental / Mechanical Characteristics / Warranty

Temperature:

Storage: -40°C / +120°C

Operating:

- Patching: 220°C (428°F), 20 seconds, 1 cycle
- Washing: 90°C (194°F), 15 minutes, 200 cycles
- Drying: 180°C (356°F), 3 minutes, 200 cycles
- Tunnel Finisher: 170°C (338°F), 10 minutes
- Autoclave: 3.2bar, RH 85%, 5min @ 134°C (273°F)

Chemicals: Resistant to all common chemicals in the washing process

Lifetime: 200 wash cycles or 3 years from shipping date, (whichever comes first)

Electrical Characteristics:

Electrical	Specification	Units	Comments
Integrated Circuit	UHF Gen 2 – ISO18000-6C		Impinj Monza 6RP
Frequency carrier	860-960	MHz	Compatible worldwide. (EU, US, ASIA)
READ RANGE	Up to: 3.2*	Meters	Depending on reading station <i>*Measured on VOYANTIC Lab equipment</i>
MULTIREAD	Up to: 800		Depending of reading station
EPC Memory	96 to 128	bits	96bits Pre-encoded by FENOTAG
User Memory	32 to 64	bits	32 per default. (64 as an option. Then EPC will be fixed to 96Bit)
TID. Unique number	96	bits	Serialized number
Data retention	50*	years	Tamb < 55°C
Write Endurance	100,000*	cycles	Tamb < 55°C
ESD immunity	+/-2	kVolts	(H.B.M)
Other features*:	Autotune function, FastID, TagFocus, Monza Self serialization, Passwords lock/Kill/Access—64 bits		

Material:

- Fabric: Polyester/Cotton
- Antenna: Multiple wires of Stainless steel.
- Adhesive for thermo-patching: specific proprietary Polyurethane. Transparent to slightly yellowish after patching.
- Module: Epoxy, Gold wire, Polyimide, Copper with gold plating.

Delivery Format:

Delivery	Specification	Details
Format	Bulk, in plastic bags	Standard: 500 tags/bag.
Delivery details	Label with lot number, number of good tags on the bag.	Approx. Weight: 170g
Test	100% tags are tested and encoded.	(unique EPC). Datafile available per shipment
Yield	100%	Tags are all tested on fully automatic machine.
Bag size	500 good products	Option: Other quantities.
Minimum of order	5,000 tags	Unit of order : bag
Personalization	Optional	<ul style="list-style-type: none"> • IC memory encoding, • Serial number engraving by laser • Customer artwork on Tag (color) • Tag delivered on reel, with or without precut line.

Thermal patching process: (for the version FenoTEX-1136-R6P):

Recommended: 206°C/12s/5bars, or 210°C/10s/5bars.

Heat sealing should be performed on **clean and dry items**

Barrier textiles need extra attention (very thin layer on top of textile which could decrease patching adhesion). Due to the nature of the textiles i.e. developed to prevent matter from passing through it, Patching the transponder can be an issue. In that case, an extra cycle to pre-heat the barrier textile for 7 to 10 seconds can amend any adhesion issues. Position the transponder patch immediately after pre-heating and seal it into place.

The final adhesion is also depending of your material. (Please validate your parameters with your own machine and material before using)

Disclaimer: FENOTAG reserves the right to change its product and services at any time without notice. As our products are used in circumstances beyond our control, we cannot be held liable for any damage caused through their use. This product specification replaces earlier versions.