

# AD Durable Denim PFL

## Product characteristics

### Level of Integration

Fully

### Process of Integration

Sew-in

### Inventory Management

Fully

### Self Check-Out Functionality

Fully

### Support Use-Cases beyond POS

Partly via QR link

### Printing

Thermal

### Encoding

Standard

### Washable / Durable

Yes - Intended for Denim Manufacturing and Aggressive Wash

### Softness / touch & feel

Low

### Segments

Apparel  
Retail

### Frequency Band

UHF 860 - 960 MHz

### International Standards

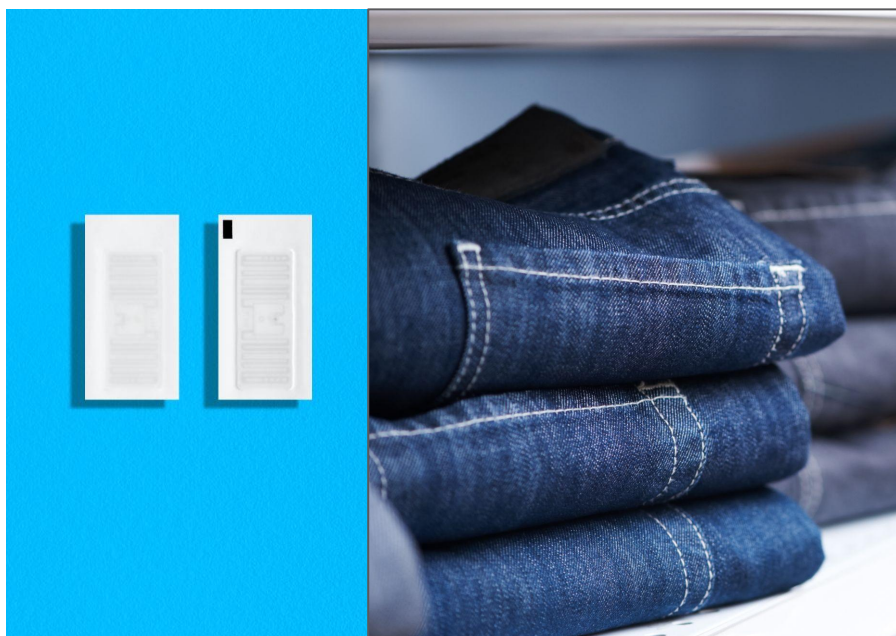
ISO/IEC 18000-63 Type C

### RoHS

EU Directive 2011/65/EC and  
Directive (EU) 2015/863

### REACH

Regulation (EC) No. 1907/2006



## Embedded RFID solution: aggressive wash-proof for denim garments

AD Durable Denim PFL\* is a durable sew-in RFID solution for printed fabric labels that is designed to endure the aggressive pre-POS (point of sale) denim washes such as enzymes, acid bleach, ozone and stone treatments - up to 20 home wash cycles.

Intended for Denim Manufacturing and User Care:

- Enzyme wash-proof
- Acid wash-proof
- Stone wash -proof
- Ozone treatment-proof
- Dry cleaning
- Some industrial wash applications

The discreet sewn-in solution prevents tampering to ensure RFID labels remain part of the garment and enables retailers to optimize inventory management:

- Supply chain & omnichannel visibility
- Inventory accuracy
- Loss prevention
- Self checkout
- Easy and quick return handling (no re-tagging)

AD Durable Denim PFL\* is currently available with the AD Miniweb M730 UHF inlay.

Avery Dennison inlays and tags are compliant with ISO 9001:2015 Quality Management and ISO 14001:2015 Environmental Management, which ensure a reliable and state-of-the-art product compliant with the needs of brand manufacturers and retailers.

\*Includes technology patented in the US and/or other countries

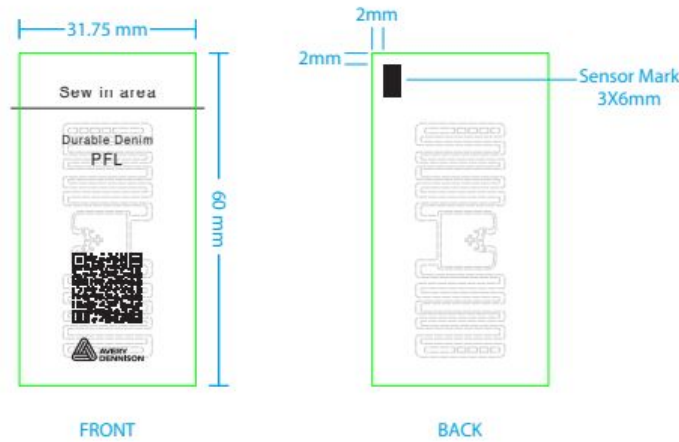
\*\*For products going through up to 20 home wash/dry cycles

\*\*\*Product available to Direct Business only

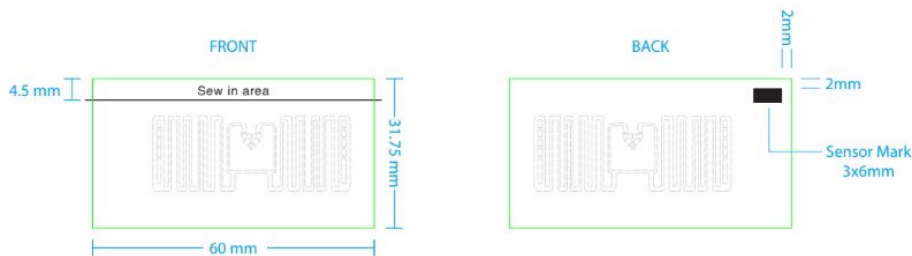
\*\*\*\*We define durable as RF performance passing the defined wash cycles



Use Case #1: Printed Care Label



Use Case #2: Hidden Solution in Denim Belt



Available RFID inlays

Available Inlays	Frequency	IC	Antenna Size	AD Durable Denim PFL* size
AD Miniweb M7	UHF	Impinj M730	42 x 16 mm / 1.65 x 0.63 in	60 x 31.75 mm / 2.36 x 1.25 in

\*Product can be qualified on more inlays

Denim and aggressive wash settings

Denim wash		Aggressive wash	
Step 1	Step 2	Step 1	Step 2
Stone wash	Bleach	Dyeing at 80°C	Washing with sodium perborate + organic reducing compound based on aminomethanesulfonic acid at 90°C

Wash results

1x Ozone treatment and Dry cleaning	100% PASS
2x Denim and Aggressive washing	100% PASS
20 x Home wash cycle (40°)	100% PASS

Contact information

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**Warranty:** Please refer to Avery Dennison standard terms and conditions: [rfd.averydennison.com/termsandconditions](https://www.averydennison.com/termsandconditions)

**Care and handling:** RFID inlays are sensitive to ESD. Observe standard industry practices relating to electronics / RFID to keep environmental impact and static charge to a minimum.

**Applications:** This product should be tested by the customer / user thoroughly under end use conditions to ensure the product meets the particular requirements. Avery Dennison does not represent that this product is fit for any particular purpose or use. Avery Dennison reserves the right to modify, change, supplement or discontinue product offerings at any time without notice. The information contained herein is believed to be reliable but Avery Dennison makes no representation concerning the accuracy or correctness of the data.