AD Miniweb U9 Pure™

Global plastic free RFID inlay, ideal for small apparel labels

AD Miniweb U9 Pure is the smallest inlay within the Avery Dennison Smartrac portfolio with a 100% plastic free construction. The compact, 42 x 16 mm antenna footprint can be easily converted into a wide range of finished media formats. The inlay is designed for retailers who will be tagging merchandise across the globe that require consistently high read rates, offering excellent performance on difficult-to-tag materials like cardstock, glass and plastic and in other demanding, close-coupling environments. AD Miniweb U9 Pure is available in both dry and wet inlay formats as well as pressure-sensitive label.

Sustainability - 100% Plastic Free

Pure inlays are produced via innovative antenna manufacturing technology where aluminium antenna is made directly on a paper carrier, making the products 100% plastic free, and according to an LCA (Life Cycle Analysis) study by an independent institute provide typically 70-90% savings in carbon footprint compared to traditional etching method. The manufacturing process also enables recycling excess materials and reducing the total amount of materials while maintaining the overall performance of the product.

The impact of the Pure paper-based inlays and tags in cardboard recycling has been verified by a third-party laboratory in the EU against Cepi Recyclability Test Method Version 3 (Part I: Recycling mill with conventional process and PTS-RH 021:97/2012. In the US, the hang tag construction is certified by Western Michigan University against SBS-E Part I (repulpability) and Part II (recyclability). How2Recycle® has “pre-qualified*” the RFID construction when applied to a paper hang tag and determined that the structure is eligible for a widely recyclable label.

Quality

Like all RFID products from Avery Dennison, AD Miniweb U9 Pure inlays are manufactured according to the industry’s highest quality standards, as confirmed by the RFID Lab at Auburn University. The inspection body awarded Avery Dennison its first comprehensive and significant ARC accreditation for quality.

Overview

Frequency Band	UHF 860 - 960 MHz
Chip / Chip Attachment Technology	NXP UCODE 9 / Direct Chip Attach
Antenna Dimensions	42 x 16 mm / 1.65 x 0.63 in
International Standard	ISO 18000-63, EPC Class 1 Gen 2
Industry Segments	Apparel General Retail Logistics
Applications	Supply Chain Management Retail Inventory and Logistics
RoHS	EU Directive 2011/65/EU and Directive (EU) 2015/863
REACH	Regulation (EC) No. 1907/2006

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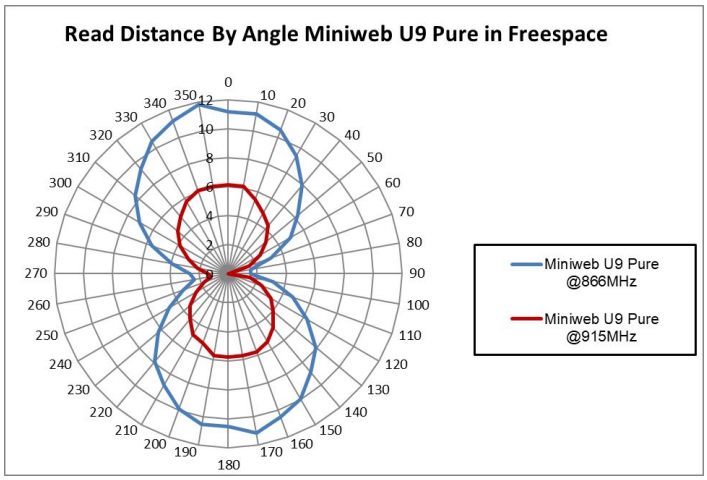
***How2Recycle:** ”Additional components, product application, or other attributes may change the final recyclability of the package. Must be a How2Recycle member and submit a label request to use the label on pack”.

Technical features

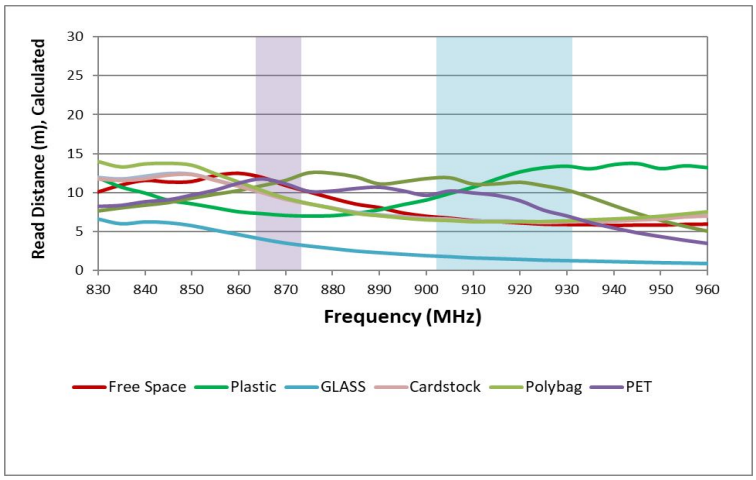
Chip / Chip Attachment Technology	NXP UCODE 9 / Direct Chip Attach		
EPC and User Memory	96-bit and 0-bit		
TID Memory	96-bit / 48-bit unique serial number		
Product Code	IL-612452	IL-612461	IL-612460
Delivery Format	Dry inlay	Wet inlay	Label
Die-Cut Dimensions	-	45 x 18 mm / 1.77 x 0.71 in	45 x 18 mm / 1.77 x 0.71 in
Die-Cut Corner Radius	-	1 mm / 0.039 in	1 mm / 0.039 in
Inlay Substrate	Paper 64	Paper 64	Paper 64
Face Sheet	-	-	Mid-gloss paper
Adhesive	RA-5	RA-5	RA-5
Total Thickness (over chip and release liner)	6.61 - 8.11 mils / 168 - 206 microns	9.29 - 11.34 mils / 236 - 288 microns	11.77 - 14.37mils / 299 - 365 microns
Standard Pitch	20 mm / 0.79 in	20 mm / 0.79 in	20 mm / 0.79 in
Web Width	48 mm / 1.89 in	48 mm / 1.89 in	48 mm / 1.89 in
Core Size	76 mm / 3 in	76 mm / 3 in	76 mm / 3 in
Quantity / Reel	20,000 pcs/reel	10,000 pcs/reel	5,000 pcs/reel
Operating Temperature	-40 °C to 85 °C / -40 °F to 185 °F		
On-Metal	Non metal		
ARC Certificates	ARC Specification Guide		

*Other product codes available upon request.

Orientation sensitivity



Read range



All graphs are indicative: performance in real life applications may vary.

Sustainability features

Plastic Free	100% PET, PP, PE Free
Recyclability	The product is recyclable in the region where it is sold. Recyclability is subject to regional and country specific standards.
Paper & Cardboard	EU Paper recyclability: Paper and Board - Recyclability Laboratory test method, part 1 recycling mill with conventional process (version 3 Feb 2025) (CEPI), PTS RH021:97/2012
	US Paper Recyclability: SBS-E Part I (Repulpability) and Part II (Recyclability)
	Certified by Western Michigan University (WMU) for RFID paper cardboard incl. Hangtags and flexible paper packaging
	How2Recycle® "pre-qualification" for RFID construction when applied to a paper hangtag and flexible paper packaging
Responsible Sourcing	100% Paper based raw materials come from responsible sources

For more information, please visit the Avery Dennison sustainability page.


Plastic Free


Recyclable


Responsible Sourcing

Find more label solutions at
rfid.averydennison.com

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