Avery Dennison Label and Packaging Materials Product Guide

Europe 2022

Intelligent Labels for Pharmaceuticals





Everything you need for intelligent labels, from one trusted partner Whether it's inventory management, patient safety, or counterfeiting prevention, the increasingly complex challenges facing pharmaceutical packaging call for the functionality made possible by digitally enabled intelligent labels. We offer complete intelligent label solutions—including innovative materials, game-changing RFID technology and end-to-end data management—that make it easier to increase efficiency, improve product security and patient compliance, and meet regulations mandating an automated chain of custody.



The right technology

With the industry's largest portfolio of inlay designs for UHF, HF and NFC frequency bands, we offer a solution for virtually every package. We've also developed atma.io: a connected product cloud, a platform that assigns unique digital IDs to each pharmaceutical item. Providing end-to-end transparency, it tracks, stores and manages all the events associated with each individual product — from source to consumer and beyond.

The right materials

We pair our RFID technology with a wide range of paper and filmic label constructions specifically tested for pharmaceutical and healthcare products and compliant with all applicable regulations. These include transfer tapes and gum twins for creating RFID tags with dry inlays, along with adhesives engineered for small-diameter containers, high and low temperatures, rough substrates and other challenges specific to pharmaceutical packaging.

The right experts

We've defined labeling since 1935. And we've driven RFID adoption since 2004. Today we're the world's largest maker of UHF RFID inlays, with more than 1,750 patents and 20 billion tags produced to date. As more pharmaceutical and healthcare companies capture the efficiencies, expanded functionality, and richer consumer connection made possible by intelligent labels, we're the company they trust to deliver and help implement consistently dependable solutions—at any volume, virtually anywhere on the globe.

Key features

- Custom solutions available
- · Fast product qualification
- Up-to-the-minute regulatory knowledge to ensure compliance

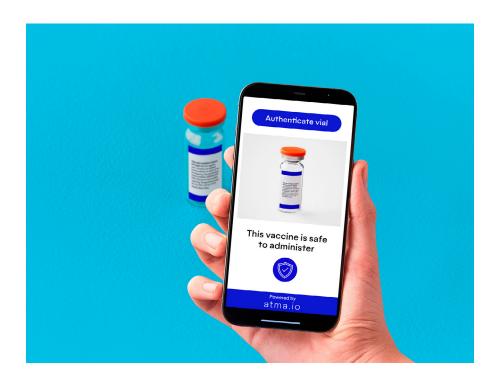


Applications

Patient connectivity/Improved accuracy/ Tracking and tracing of medications and instruments/Product authentication and chain of custody compliance

Benefits

- . Faster stock checks
- Less paperwork
- . Elimination of human error
- · Increased accuracy and safety



Common Pharma Transfer Tapes & Gum Twins

Commonly used for	code	product description	service	adhesive characteristic		
Small diameter	AN333	TT BG40WH S2000NP-BG40BR	1m	/		
	BM484	TT BG40 BROWN LR S692NP-BG40WH HR	1m	low migration		
	AM841	TT BG40WH LR S697-BG40WH HR	1m	chemical, heat and moisture resistance		
	AH431	LW FSC S692NP-BG40WH FSC	exact 2000 LM	low migration		
	BB544	MC PRIMECOAT FSC S2000NP-BG40BR	exact 2000 LM	/		
Blood bag / plasma	BE412	TT BG40 WHITE AL171-BG40BR	1m	resistant to chemicals, heat, moisture and plasticizers		



Common Pharma RFID Inlays

Commonly used in	inlay family*	frequency	design (not to scale)	dimensions (mm)	tight mandrel**	near liquid	glass	metal
Blood and IV bag	AD-163	UHF		60 x 4	•	•	•	•
	Minitrack	HF		14 x 31	•	•	•	•
	AD301	UHF		15 x 30	•	•	•	•
	Accessory	UHF		30 x 15	•	•	•	•
Patient connectivity	Bullseye™	HF/NFC		Ø 33	•	•	•	•
	Circus™	HF/NFC	Circo	Ø 18	•	•	•	•
	Circus™ Tamper Loop	HF/NFC	•	20 x 50	•	•	•	•
	Microtrack	HF/NFC		20 x 10	•	•	•	•
Medical disposables	Minidose	UHF	600_1	22 x 12	•	•	•	•
	AD-850	UHF	Ó	Ø 10	•	•	•	•
	AD-190	UHF		22 x 12.5	•	•	•	•
	AD-229	UHF		95 x 8.2	•	•	•	•
	Trap	UHF	616.2	8 x 22	•	•	•	•
Medical equipment	Midas Flagtag®	UHF	рыгонс	31.41 x 18	•	•	•	•
	AD-321	UHF		44 x 19	•	•	•	•
	Trap	UHF	616-2	8 x 22	•	•	•	•
	Belt DF	UHF/HF/NFC		70 x 20	•	•	•	•

Recommended,
Application testing required,
Not recommended.

We recommend testing all constructions before mass production.

Everything you need for transformative intelligent labels.

Intelligent labels connect the physical and the digital to solve problems and create new possibilities. We do the same, with our expertise in materials and RFID technology. Learn more from your Avery Dennison representative or visit <u>label.averydennison.com</u>.

For more information on technical performance and printing recommendations, please refer to the respective datasheets. Please note that the Avery Dennison product range and service offering can be subject to changes. For an accurate overview, please check our website label averydennison or contact your local Avery Dennison sales representative.

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^{*} Multiple end applications per product are possible, check our full RFID Pharma portfolio <u>here</u>.

^{**} Depending on packaging.