

Avery Dennison
Smartrac
Quick Guide

January 2023

RFID labels for Automotive



Why RFID?

- Key enabler for industry 4.0.
- Significant increase in production efficiency.
- Comprehensive visibility throughout the supply chain.
- Complete control of manufacturing processes.
- Effective means for anti-counterfeiting and anti-diversion.

Why Avery Dennison?

Cooperation with other technology leaders

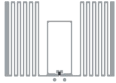











- Partner of leading IC suppliers: NXP, Impinj, Axzon (sensor inlays).
- A broad portfolio and RFID formats
- Comprehensive range of inlays (RAIN / UHF, NFC, LF) suitable for automotive applications.
- Passive (no-battery) single-chip RFID (UHF) sensor Inlays for leakage and moisture detection.

Unique value










- Dedicated global automotive industry team.
- Trusted partner of leading manufacturers.
- Broad and extensive experience in the automotive industry.














Our RFID product recommendations

Product Name	Design (not to scale)	Antenna Dimensions	Chip	EPC and User Memory	TID Memory	Delivery Format	Applications
AD-151		22 x 15 mm 0.90 x 0.60 in	NXP G2iM	256-bit and 512-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay	Asset Tracking
AD-226		95 x 8 mm 3.74 x 0.31 in	NXP G2iM	256-bit and 512-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay	Asset Tracking
AD-238		70 x 14.5 mm 2.76 x 0.57 in	NXP UCODE 8	128-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Industrial Applications
AD-23x Pure		70 x 14.5 mm 2.76 x 0.57 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Apparel Industrial Applications
AD-239		70 x 14.5 mm 2.76 x 0.57 in	Impinj M730 Impinj M750	128-bit 96-bit and 32-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Apparel Industrial Applications
AD-373		53 x 19 mm 2.09 x 0.75 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay	Asset Tracking
AD-380		50 x 30 mm 1.97 x 1.18 in	NXP G2iM	256-bit and 512-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay	Asset Tracking
AD-454 FCC		69.85 x 19.05 mm 2.75 x 0.75 in	Impinj Monza R6-P	128-bit / 96-bit and 32-bit / 64-bit	96-bit / 48-bit unique serial number	Label / sticker	Industrial Applications
AD-662		90 x 19 mm 3.54 x 0.75 in	NXP UCODE DNA	224-bit and 3K-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay	Large Memory Asset Tracking
AD-663		90 x 19 mm 3.54 x 0.75 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay	Asset Tracking Inventory
AD Belt		70 x 14 mm 2.756 x 0.551 in	NXP G2iM	256-bit and 512-bit	96-bit / 48-bit unique serial number	Wet inlay Paper	Asset Tracking Inventory
AD Belt		70 x 10 mm 2.76 x 0.39 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Wet inlay Paper	Asset Tracking Inventory



Our RFID product recommendations

Product Name	Design (not to scale)	Antenna Dimensions	Chip	EPC and User Memory	TID Memory	Delivery Format	Applications
AD Dogbone®		86 x 24 mm 3.385 x 0.94 in	NXP UCODE 7XM	448-bit and 2k-bit	96-bit / 48-bit unique serial number	Dry Inlay Wet Inlay Paper	Asset Tracking Inventory
AD Dogbone®		94 x 24 mm 3.70 x 0.90 in	Impinj M730 Impinj M750	128-bit 96-bit and 32-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Asset Tracking Inventory
AD Fly		12 x 12 mm 0.5 x 0.5 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Wet Inlay Paper	Asset Tracking
AD Grille		22 x 22 mm 0.90 x 0.90 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Wet Inlay Paper	Asset Tracking
AD Grip		80 x 40 mm 3.14 x 1.57 in	Impinj M730 Impinj M750	128-bit / 0-bit	96-bit / 48-bit unique serial number	Dry+ inlay Wet Inlay	Asset Tracking
AD Maxdura® Tire Tag		43 x 2.0 x 2.0 mm 1.69 x 0.07 x 0.07	Monza M730 Higgs 9	128-bit and 0-bit Up to 496-bit of EPC and up to 688 user bit	96-bit / 48-bit unique serial number 48-bit unique TID, 32-bit access	Hard Tag	Automotive Industrial Applications
AD Miniweb		40 x 18 mm 1.575 x 0.709 in	NXP UCODE G2iM	256-bit and 512-bit	96-bit / 48-bit unique serial number	Dry inlay Wet Inlay Paper	Asset Tracking
AD Miniweb		42 x 16 mm 1.65 x 0.60 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Wet inlay	Asset Tracking
AD Miniweb		42 x 16 mm 1.65 x 0.60 in	NXP UCODE 8	128-bit and n/a	96-bit / 48-bit unique serial number	Wet inlay	Asset Tracking





Our RFID product recommendations

Product Name	Design (not to scale)	Antenna Dimensions	Chip	EPC and User Memory	TID Memory	Delivery Format	Applications
AD Miniweb Global		42 x 16 mm 1.65 x 0.63 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Asset Tracking
AD Miniweb FCC		42 x 16 mm 1.65 x 0.63 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Asset Tracking
AD Miniweb FCC		42 x 16 mm 1.65 x 0.63 in	M780	496-bit EPC, 128-bit user memory	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Automotive
AD Sensor Tadpole		18 x 82.15 mm 0.71 x 3.23 in 18 x 81.87 mm 0.71 x 3.18 in	Axzon Magnus S3	128-bit and 144-bit	N/A	Wet inlay	Automotive Industrial Applications
AD Shortdipole		93 x 11 mm 3.66 x 0.43 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Paper	Asset Tracking Inventory
AD Shortdipole		93 x 11 mm 3.66 x 0.43 in	Impinj Monza 4E	496-bit and 128-bit	96-bit / 48-bit unique serial number	Wet inlay Paper	Asset Tracking Inventory
AD Squarewave		93 x 11 mm 3.66 x 0.43 in	Impinj M730	128-bit and 0-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Asset Tracking Inventory
AD TracX-DCA		50 x 50 mm 1.97 x 1.97 in	Impinj M730 Impinj M750	128-bit and 0-bit	96-bit / 48-bit unique serial number	Dry inlay+ Wet inlay+ Label	Automotive Inventory Logistics
AD TracX-Strap		50 x 50 mm 1.97 x 1.97 in	Impinj M730 Impinj M750	128-bit and 0-bit	96-bit / 48-bit unique serial number	Wet inlay+	Automotive Inventory Logistics
AD Twist		27 x 27 mm 1.063 x 1.063 in	NXP UCODE 7XM	Up to 448-bit and 2-Kbit	96-bit / 48-bit unique serial number	Wet inlay	Automotive Cable Tagging
AD Web		50 x 30 mm 1.97 x 1.18 in	Impinj M730 Impinj M750	128-bit and n/a 96 bit EPC and 32bit	N/A	Dry inlay Wet inlay Label / sticker	Asset Tracking

Our RFID high temperature recommendations

Product Name	Design (not to scale)	Antenna Dimensions	Chip	EPC and User Memory	TID Memory	Delivery Format	Applications
AD Belt		70 x 10 mm 2.76 x 0.40 in	U7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Wet inlay Paper	Aviation Automotive
AD Dogbone		86 x 24 mm 3.385 x 0.944 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Dry inlay	High Temperature Asset Tracking Inventory

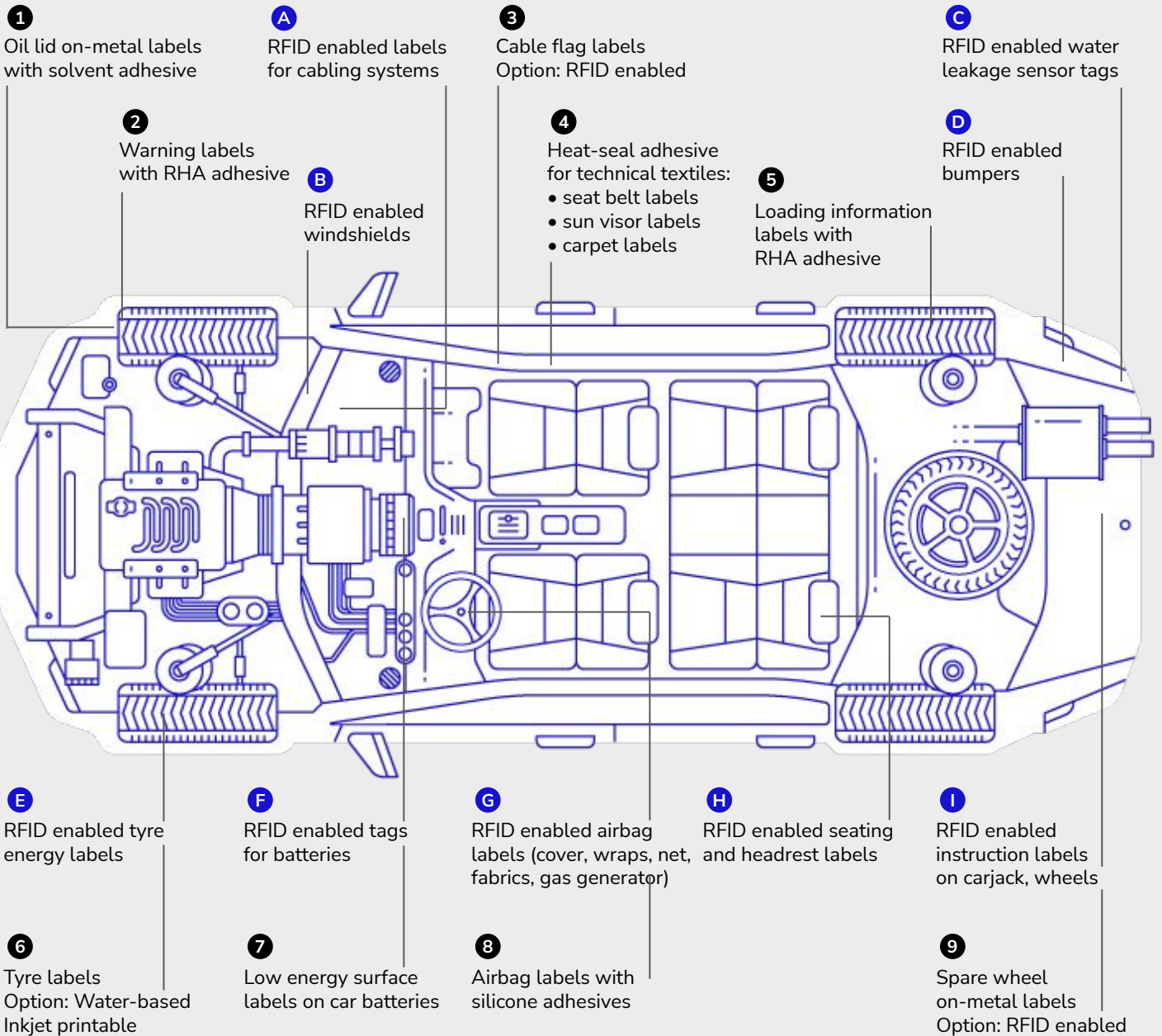
Our RFID on metal product recommendations

Product Name	Design (not to scale)	Antenna Dimensions	Chip	EPC and User Memory	TID Memory	Delivery Format	Applications
AD-456		64 x 6 mm 2.52 x 0.24 in	NXP UCODE 8	128-bit and n/a	96-bit / 48-bit unique serial number	Label / sticker	On-Metal Asset Tracking
AD Midas Flagtag®		47 x 18 mm 1.85 x 0.71 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Wet Inlay	On-Metal Asset Tracking
AD Midas Flagtag® DF		34.4 x 18 mm 1.36 x 0.71 in	EM4425	96-bit / up to 480-bit	96-bit (UHF) / 64-bit (HF) overlapping	Label	On-Metal use Cases, Customer Engagement
AD Skyline ETSI		54 x 25 x 1.8 mm 2.12 x 0.98 x 0.7 in	NXP UCODE 7XM	448-bit and 2K-bit	96-bit / 48-bit unique serial number	Wet inlay	On-Metal Asset Tracking



Labelling Solutions for Automotive Applications

Offering a broad range of benefits for the automotive industry, from tire quality monitoring to item-level manufacturing, Avery Dennison enables companies to have complete quality control and improved visibility throughout the production process.



Converter Labels



RFID Inlays Utilized (more options available)

