

Tag Requirement	Tag Data Construct	When Used
UID Pack	DoD-64 DoD-96	On item packaging for items meeting the DoD criteria for assignment of UID
Case, Transport Package, Palletized Unit Load	DoD-64 DoD-96	Items shipped as either pure or mixed case, pallet

DoD-96 Tag Data Construct			
Header	Filter	Government Managed Identifier (Cage Code)	Serial Number
8 bits	4 bits	48 bits	36 bits

Header — specifies that the tag data are encoded as a DoD 96-bit tag construct. Use binary number 0010 1111. Detailed in the below chart below are the only Headers accepted by the Department of Defense, along with their corresponding binary codes. Please apply the appropriate header to each tag.

Header Identifiers	
2F	00101111 DoD-96
30	00110000 SGTIN-96
31	00110001 SSCC-96
33	00110011 GRAI-96
34	00110100 GIAI-96
35	00110101 GID-96
36	00110110 SGTIN-198
37	00110111 GRAI-170
38	00111000 GIAI-202

Figure 2: Accepted Headers

For additional information on acceptable Headers, please see the most recent version of the EPC Tag Data Standard at: <http://www.epcglobalinc.org/standards/tds/>.

Filter — identifies a pallet (palletized unit load), case (shipping and exterior container), or unit pack associated with tag, represented in binary number format using the following values:

Filter Values	
0000	Pallet (palletized unit load)
0001	Case (shipping and exterior container)
0010	Unit pack
All others	Reserved for future use

Serial Number — uniquely identifies up to $2^{36} = 68,719,476,736$ tagged items, represented in binary number format. After the serial number is converted into binary format, it must be left-padded with zeros to 36 bits total. **The “serial number” required in the RFID tag ID data construct does not refer to the serial number of the product being shipped. The “serial number” in the RFID tag ID is merely a unique number assigned by the supplier to represent a specific RFID tag.** This “serial number”, combined with the supplier’s Government Managed Identifier, or CAGE code, together with the header and filter values comprises the RFID tag ID. It is the responsibility of the supplier to insure that this is a unique number across all shipments to DoD.

Regardless - of how you procure the RFID tag, when it is applied to goods you are supplying to the DoD, you must transmit an ASN indicating the relationship of this id to a specific shipment as previously discussed. Within this ASN, you must provide the id of every RFID tag in a shipment and you must represent this id in hexadecimal format.

Performance Requirements

For reference below are our minimum readability performance requirements

Portal: 3 meters @ 10 MPH

Conveyor: 1 meter @ 600 feet per minute

Placement

On palletized unit load

- 1 inch min from top
- 17 inch max from natural bottom
- 1 inch min from natural bottom
- 0.75 inch minimum from either vertical edge

Other Tag Placement Rules

- The transponder may be integrated with the shipping label or may be an independent entity where a separate shipping label would also be necessary
- All address labels and RF tags should be affixed at a suitable location where there is a minimum risk of damage and highest potential for successful interrogation.
- The bottom edge of the address label containing the unit load information should be within the range of 81 cm to 122 cm or 32-48 inches from the bottom of the pallet. If the loaded pallet is less than 51 cm or 20 inches in height, the label could be placed as high as possible on the pallet, but not closer than 5 cm or 2 inches to the natural top of the unit load.
- Each unit load shall have on RF tag, independent or part of an address label, which contains the unit load information. Additionally, if the pallet is reusable, there may be a RF tag containing a unique returnable asset identifier.
- RFID enabled labels shall be applied to shipping container or palletized unit load as per the standard represented in MIL-STD-129
- The address label shall be placed on the identification marked side and right of center on a vertical face, allowing a minimum of 5 cm or 2 inches from all edges. An additional address label may be placed on the identification marked end for styles which, because of their configuration, allow access by materials handling equipment only to the end of the container.
- The RFID enabled label should not be placed over a seam nor should sealing tape or bands be placed over the label on a manner that interferes with the scanning of the label bar codes or trading the transponder data.
- The RFID enabled label should not be placed in a manner that overlaps any other existing RF transponder. There should be at least a 10 cm or 4 inch separation.
- The RFID enabled label on a palletized unit load should not be attached to an exterior container if the cargo within the exterior container will not be removed from receipt processing and storage.
- ***if RFID enabled address labels are not used, then attach a separate passive RFID tag and a separate address label***
- The passive RFID tag should be placed on the Identification marked side and right of center on a vertical face, allowing a minimum of 5 CM or 2 inches from all edges.
- A passive RFID tag should not be placed in a manner that overlaps any other existing radio frequency RF transponder. There should be at least a 10 cm or 4 inch separation