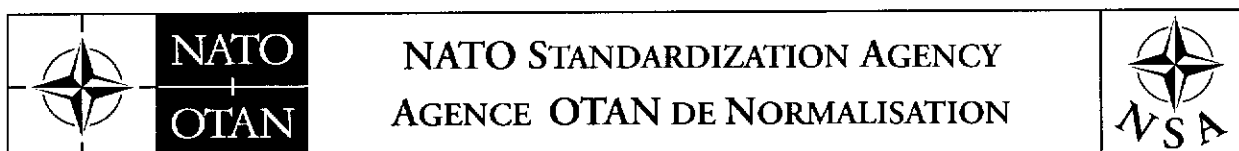


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ARMY BOARD

29 March 2004

NSA(ARMY)0353E-AST/2494

Army Board Distribution List N° 4

**STANAG 2494 AST (EDITION 2) – NATO ASSET TRACKING SHIPPING LABEL AND ASSOCIATED SYMBOLOGIES**


References:

- a. NSA(ARMY)0469-AST/2494 dated 22 May 2003 (Edition 2) (Ratification Draft 1)
- b. MAS(ARMY)1139-AST/2494 dated 16 October 2000 (Edition 1)

1. The enclosed NATO Standardization Agreement which has been ratified by nations as reflected in the **NATO Standardization Document Database (NSDD)**, is promulgated herewith.
2. The references listed above are to be destroyed in accordance with local document destruction procedures.
3. APP-4 should be amended to reflect the latest status of the STANAG and AP.

ACTION BY NATIONAL STAFFS

4. National staffs are requested to examine **their ratification status of the STANAG** and, if they have not already done so, advise the Army Board, NSA, through their national delegation as appropriate of their intention regarding its ratification and implementation.

J. MAJ   
Brigadier General, PLAR  
Director, NSA

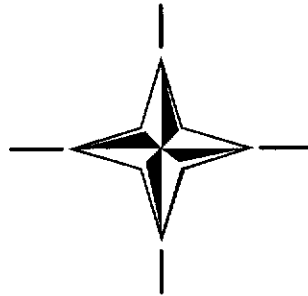
Enclosure:  
STANAG 2494 (Edition 2)

NATO Standardization Agency – Agence OTAN de Normalisation  
B-1110 Brussels, Belgium Internet site: <http://nsa.nato.int>  
E-mail: [nsa\\_army@hq.nato.int](mailto:nsa_army@hq.nato.int) – Tel 32.2.707.55.79 – Fax 32.2.707.57.18

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STANAG N° 2494  
(Edition 2)

**NORTH ATLANTIC TREATY ORGANIZATION  
(NATO)**




**NATO STANDARDIZATION AGENCY  
(NSA)**

**STANDARDIZATION AGREEMENT  
(STANAG)**

SUBJECT: NATO ASSET TRACKING SHIPPING LABEL AND ASSOCIATED SYMBOLOGIES

Promulgated 29 March 2004

J. MAJ   
Brigadier General, PLAR  
Director, NSA

NATO/PfP UNCLASSIFIEDRECORD OF AMENDMENTS

No.	Reference/date of amendment	Date entered	Signature

EXPLANATORY NOTESAGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Director NATO Standardization Agency under the authority vested in him by the NATO Standardization Organisation Charter.
2. No departure may be made from the agreement without informing the tasking authority in the form of a reservation. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.
3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

4. Ratification, implementation and reservation details are available on request or through the NSA websites (internet <http://nsa.nato.int>; NATO Secure WAN <http://nsa.hq.nato.int>).

FEEDBACK

5. Any comments concerning this publication should be directed to NATO/NSA – Bvd Leopold III - 1110 Brussels - BE.

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Agreed English/French texts

STANAG 2494  
(Edition 2)

NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT  
(STANAG)NATO ASSET TRACKING SHIPPING LABEL AND ASSOCIATED SYMBOLOGIESAnnexes:     A     Physical Depiction and Dimensions of NATO Asset Tracking  
Shipping Label

## Related Documents:

STANAG 2495	Data Formats for Asset Tracking
STANAG 4281	NATO Standard Marking for Shipment and Storage
STANAG 4329	NATO Standard Barcode Symbology
STANAG 4553	Electronic Commerce
AAP-23	NATO Glossary of Packaging Terms and Definitions
AAP-35	NATO Glossary of Asset Tracking Terms and Definitions
EN 1556	Bar coding – Terminology
ISO 646	Information Technology - ISO 7-bit coded character set for information interchange.
ISO 8859-1	Information Processing - 8-bit Single byte Coded Graphic Character Sets - Part 1: Latin Alphabet No. 1
ISO/IEC 15394	Packaging - Bar Code and two dimensional symbols for shipping, transport and receiving labels
ISO/IEC 15415	Information technology – Automatic identification and data capture techniques Bar code print quality test specification - Two dimensional symbols
ISO/IEC 15416	Information technology – Automatic identification and data capture techniques – Bar code print quality test specification – Linear symbols
ISO/IEC 15417	Information technology – Automatic identification and data capture techniques – Bar code symbology specification - Code 128
ISO/IEC 15424	Information technology – Automatic identification and data capture techniques – Data Carrier Identifiers (including Symbology Identifiers)
ISO/IEC 15426-1	Information technology – Automatic identification and data capture techniques – Bar code verifier conformance specifications – Part 1: Linear symbols
ISO/IEC 15426-2	Information technology – Automatic identification and data capture techniques – Bar code verifier conformance specifications – Part 2: Two dimensional symbols

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ISO/IEC 15434	Information technology – Automatic identification and data capture techniques – Syntax for high capacity media
ISO/IEC 15438	Automatic Identification and data capture techniques - International Two-dimensional Symbology Specification - PDF417
ISO/IEC 16388	Information technology – Automatic identification and data capture techniques - Bar code symbology specification - Code 39
ISO/IEC19762	Information technology – AIDC techniques – Harmonised vocabulary
ANS MH10.8.2	Data identifier and Application identifier standard

AIM

1. The aim of this agreement is to facilitate NATO Asset Tracking at the interface of National asset tracking systems by providing a guideline for application of combined two-dimensional and linear bar code shipment labels. This agreement will provide human readable data specifications as well as the format for incorporation of UCC/EAN-128 and PDF 417 symbologies.

AGREEMENT

2. Participating nations agree to implement the label format conventions as depicted in Annex A, to the extent of minimal compliance. These nations shall implement in full all practices and guidelines as discussed in Annex A.

DEFINITIONS

3. Terms and definitions used for the purpose of this agreement are defined in AAP-35, STANAG 4329 and STANAG 4553.

DETAILS OF THE AGREEMENT

4. Annex A illustrates the basic format of the proposed NATO Asset Tracking Shipping Label. This Annex describes three label formats: NATO Asset Tracking Label - minimum format (for minimal compliance), optional format (with additional linear bar coded information) and full optional format (all options including PDF 417 symbology).

IMPLEMENTATION OF THE AGREEMENT

5. This STANAG is implemented when the necessary orders/instructions to adopt the methods described in this agreement have been issued to the forces concerned.

6. This STANAG will be implemented by participating nations not later than January 2005. Participating nations are required to procure and install asset tracking hardware, as well as modify existing/developing asset tracking systems to achieve minimal compliance with this agreement in advance of the implementation date.

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ANNEX A TO  
STANAG 2494  
(Edition 2)

PHYSICAL DEPICTION AND DIMENSIONS OF NATO ASSET TRACKING  
SHIPPING LABEL

GENERAL

1. This agreement is designed to be used in conjunction with STANAG 2495.
2. The mandatory qualifier standards and associated symbologies are as follows:
  - a. UCC/EAN application identifiers (AI), in accordance with ISO/IEC 15418, shall only be used in conjunction with the UCC/EAN-128 symbology, in accordance with ISO/IEC 15394, being a subset of Code 128.
  - b. ANSI/FACT data identifiers (DI), in accordance with STANAG 2495 and EN 1571, shall be used in conjunction with PDF 417, in accordance with ISO/IEC 15438, (the standard for PDF 417).
  - c. Any other bar codes used shall meet the requirements of STANAG 4329.
3. Where information is bar coded using applicable UCC/EAN-128 bar codes, the information type is to be printed in clear in the Human readable portion of the label.
4. The recommended sizes for these labels are ISO standard paper size A5, (148 x 210 mm), or US 4 x 6 inches. The figures depicting these labels are not to scale; depicted measurements are to the nearest millimetre.

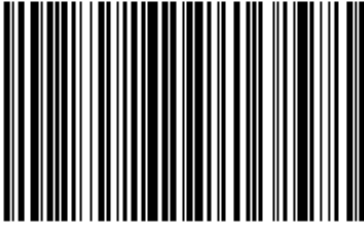
NATO ASSET TRACKING SHIPPING LABEL - MINIMUM FORMAT

5. The format for the minimum standard NATO asset tracking shipping label includes:
  - a. A free text area that should include a number of information blocks. The inclusion and completion of these blocks shall include the minimum "shipping" requirements of STANAG 4281.
  - b. The Serial Shipping Container Code (SSCC) encoded as an UCC/EAN-128 barcode symbol. The minimum height of the SSCC shall be 32 mm. It shall have a Human Readable Interpretation, HRI, using a font as large as practicable to aid readability and be positioned beneath the bar code itself.
  - c. Where it is necessary to give the UN Hazard Classification the full classification, including Class, Division and Compatibility grouping, shall be given.

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6. The SSCC is the primary symbol and shall be located on the bottom edge of the label. The format for this minimum information label is illustrated in Figure 1.

Figure 1.

FREE TEXT	<b>NATION OF ORIGIN</b>				
	SHIP FROM (Consignor)		SHIP TO (Consignee)		
	PIECE NUMBER*	POE	PRIORITY		
	WEIGHT / CUBE	POD	Pack Date		
	LENGTH	WIDTH	HGT		
	<div> <div>HR TEXT</div> <div>SSCC</div> </div>				
BAR CODE			32 (min.)		
NATO 2494M		(00) 350123451234567894			

2494A7


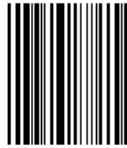
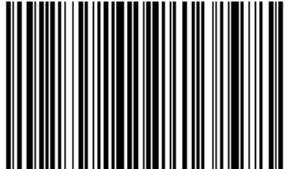
Note: \* - Piece Number – “n of x” indicates the n<sup>th</sup> piece of x pieces in a shipment, usually “1 of X” related containers of a set in a single consignment”

NATO/PfP UNCLASSIFIEDNATO ASSET TRACKING SHIPPING LABEL - OPTIONAL FORMAT

7. In addition to the minimum shipping label requirements at paragraphs 3 and 4, Figure 2 provides an optional format for a NATO Asset Tracking Shipping Label. This may contain additional bar coded information. Where the information is bar coded it is to be encoded in UCC/EAN-128 and shall have a minimum height of 27 mm. As an example Figure 2 illustrates the addition of the weight block from the free text portion encoded using UCC/EAN-128.

8. To facilitate linking to legacy systems, exceptionally a Unique National Tracking Number may be encoded in the National Symbology, e.g. Code 39. If used, the Unique National tracking Number shall be positioned in the upper right hand corner of the label.

Figure 2

FREE TEXT	<b>NATION OF ORIGIN</b>		Unique National Tracking Identifier  1234567890A	
	SHIP FROM (Consignor)		SHIP TO (Consignee)	
	PIECE NUMBER *	POE	PRIORITY	
	WEIGHT / CUBE	POD	Pack Date	
	LENGTH	WIDTH	HGT	
HR TEXT	GROSS WEIGHT, KG SSCC			
	 (3300) 10  (00) 350123451234567894			
BAR CODE				
NATO 2494-0				

2494B7


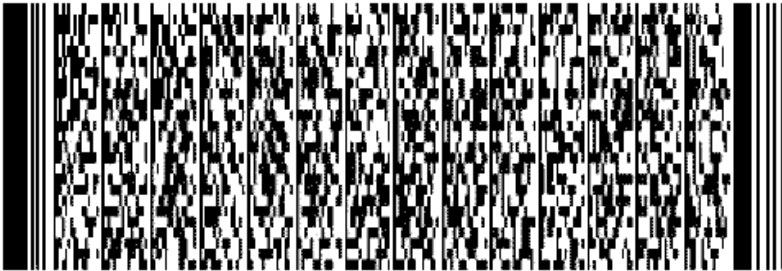



NATO/PfP UNCLASSIFIEDNATO ASSET TRACKING SHIPPING LABEL - FULL OPTIONAL FORMAT

9. This format includes a PDF 417 portable data file capability to provide optional detailed supply and transportation data for National use and is illustrated at Figure 3. The standards for this symbology are defined in ISO IEC 15438. The associated data capture standards to be used are ISO 15434, data formats as amplified by STANAG 2495.

Note: Where the label contains both PDF 417 and linear bar codes, there will be limited space available on the label and priority shall be given to maintaining a minimum of 32 mm (1.25 inch) for the 18 digit SSCC as a UCC/EAN-128 symbol.

Figure 3.

FREE TEXT	<b>NATION OF ORIGIN</b>		Unique National Tracking Identifier  1234567890A
			POSTAL / TAC
	SHIP FROM (Consignor)	SHIP TO (Consignee)	
	NATIONAL LEVEL LOGISTICS DATA 		
HR TEXT	PIECE NUMBER*	POE	PRIORITY
	WEIGHT / CUBE	POD	Pack Date
	LENGTH	WIDTH	HGT
BAR CODE	SSCC   (00) 350123451234567894 NATO 2494-F		

32  
(min)

2494C7