|  | Technische Lieferbedingungen | TL A-0032 |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Verpackung; <br> Kennzeichnung; <br> Kennzeichnen der Packungen <br> - Verpackungsstufen, A, B, C, H, T - | Teil 2 Part 2 |  |  |
|  |  | Ausgabe: Issue: |  | 9 |
|  | Packaging; Marking; Marking of packages - Packing levels A, B, C, H, T- | Datum: Date: | 07. Jul. 2014 |  |
|  |  | Seite Page | $\begin{aligned} & \text { bis } \\ & \text { to } \end{aligned}$ | 22 |

In case of doubt, the German original is binding.

## Beschaffungshinweise

Procurement Types

| $(X)$ | Code |  |
| :---: | :--- | :---: |
| (X) | an keinen Hersteller gebunden <br> Not tied to any manufacturer | C |
| () | an einen Herstellerkreis gebunden durch Benutzungsrechtsvereinbarung <br> Tied to a group of manufacturers by an agreement on user rights | E |
| () | an zugelassene Hersteller gebunden <br> Tied to approved manufacturers | F |
| () | an einen Hersteller gebunden <br> Tied to a single manufacturer | H |

Aktualitätsprüfung der TL ist erforderlich
Topicality check of this Technical Specification (TL) is required.


Zu beziehen beim:
May be obtained from

## Preface:

This TL meets the requirements specified in STANAG 4281
"NATO STANDARD Marking for Shipment and Storage" as well as the requirements set forth in SASPF.

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## NORMATIVE REFERENCES

By dated and undated references this $T L$ includes requirements specified in other documents (standards, $T L e t c$.$) . These documents are cited in the respective text passages (normative$ reference). All documents quoted in this $T L$ are listed below. In case of dated references later changes or revisions of the cited documents apply to the present $T L$ only after their incorporation (in the respective $T L$ ). In case of undated references the respective issue of the cited documents valid at the time of the conclusion of the contract applies.

DIN 1450

DIN 1451-1
DIN 1451-3 Lettering; Linear-Antiqua without serifes;
lettering for printing
DIN 25400 Basic symbol for ionizing radiation
DIN 55402-1 Shipping marks for packages;
pictorial marking for handling of goods
DIN 55467 Packaging; coverings and flat bags for packing lists and documents

Identification; marking of supply items
Means of packaging, packing list bags
Packhilfsmittel, Abdeckungen für Packlistenbeutel*)

TL 9905-0040

STANAG 4281

ISPM No. 15

Auxiliary means of packaging - plates for packages

NATO STANDARD MARKING FOR SHIPMENT AND STORAGE

International Standard for Phytosanitary Methods: Guidelines for regulating wood packaging material in international trade ${ }^{1}$
*) Document not available in an English version

Sources of supply:

1) Beuth Verlag GmbH, 10772 Berlin
2) BAAINBw Z4.5, Postfach 3001 65, 56057 Koblenz; E-Mail: baainbwz4.5@bundeswehr.org
3) BAAINBw, Postfach 3001 65, 56057 Koblenz; http://www.baain.de
4) GS1 Germany, Maarweg 133, 50825 Köln; http://www.gs1-germany.de or the responsible national GS1 MO

1
1.1

- Scope

This Technical Specification (TL) covers the marking requirements for the package (for definition see Annex A) of all packing levels A, B, C, H, T (refer to Annex A Table A1).

In case DIN standard and TL are indicated for packing in Bundeswehr preservation and packaging facilities, TL 8100-0100 Part 1 to Part 7 shall apply.

Specific technical requirements exceeding the requirements of this TL are stipulated in the respective equipment $T L$ or in the contract.
1.2 General technical-organisational requirements
1.2.1 Statutory marking regulations/provisions/rules, if any, as well as applicable carrier regulations, as amended, shall be observed.
1.2.2 In addition to this TL :
special marking requirements are applicable to e.g. packages of the following articles:

- ammunition and explosives
(in accordance with documents by BAAINBw)
- POL containers
(in accordance with TL A-0068)
- medicinal products, chemicals and reagents
(in accordance with TL 8100-0057)
- food items
- coating materials (paints) and related products
(in accordance with TL 8100-0026)
- elastomer sealings (in accordance with TL 8100-0070)
- hazardous substances

[^0]2
2.1 $\frac{\text { Guidelines for the marking of packages }}{\text { (unit, intermediate and shipping packages) }}$
2.1.1 During the specified storage life and under the specified storage conditions (depending on the appropriate packing level), the markings on the packages shall remain legible and shall be abrasion-resistant and weather-resistant.
2.1.2 The marking must not be obstructed by adhesive tapes, strappings, battens or the like and shall be legible even after proper opening of the packaging.
2.1.3 Rough surfaces shall be smoothed at the location where the marking is to be applied.
2.1.4 The marking shall be applied in black lettering on a light background and in white or yellow lettering on a dark or olive-drab background.
2.1.5 Lettering and size of the markings shall be selected so as to ensure clear legibility in accordance with DIN 1450. Lettering shall be composed of capital letters uniform in size. This size shall be adapted to the space available in the marking areas.
2.1.6 Obsolete letterings or markings of packages, packaging and auxiliary transport and storage means, when reused, shall be removed or made illegible if the lettering changed or does no longer correspond to the actual requirements. Obsolete labels, decals or tags shall be removed.
2.1.7 Additional company data on the packages must not impair the legibility of the required marking and require the customer's prior written consent.
2.1.8 If a unit package is identical with the shipping package, it shall be marked like a shipping package.
2.1.9 The following shall apply to packing level $\mathrm{H}:$

Marking is required only, if

- the supply item is not marked. In this case, the unit package shall be marked with the Stock Number and the manufacturer's data (company's name/logo or NATO manufacturer code).
- the unit package is also the shipping package. In this case, it shall be marked like a shipping package.

Any additional commercial marking shall be at the contractor's discretion.
Shipping packages shall be marked as follows

- stock number
- item name
- number of supply items in the package/applicable unit of supply
- marking of the packing level: $H$
- order number
- addresses (names and places of the consignee and the sender)
- any necessary instruction plates (e.g. electrostatics or the like)
- AIT element

Any additional commercial marking shall be at the contractor's discretion.
Mixed shipments shall be marked as follows:

- mixed shipment (Mischsendung)
- marking of the packing levels: $A / H, B / H$ or $C / H$
- order number
- addresses (names and places of the consignee and the sender)
- AIT element

Any additional commercial marking shall be at the contractor's discretion.

2.3.10 Package number

If a supply item (e.g. multipart equipment, equipment including accessories, set) is packed in various cases, crates, boxes or the like, the relation of the various packages shall be indicated by means of a numerical combination, e.g. 2 out of a total of 6 .

In case of several like multipart equipment, equipment including accessories or sets each like individual package (e.g. in package 3 out of a total of 6) must have the same contents so that it is exchangeable as far as the tolerances of the multipart equipment, equipment including accessories or set allow an exchange.
2.3.11 Weight, volume, dimensions

Gross weight:
The gross weight (means of packaging plus auxiliary means of packaging plus packed product) shall be rounded to the nearest full kg . The weight number shall be succeeded by the weight unit "kg".

Volume:

The volume is the cubic content of the container, bundle, or tied load calculated by means of the exterior dimensions. It shall be indicated in $\mathrm{m}^{3}$ rounded to the nearest cubic decimetre ( $\mathrm{dm}^{3}$ ).
Irregular, cylindrical or round articles shall be considered as rectangular solids. The volume shall be succeeded by $" \mathrm{~m}^{3}$ ".

Dimensions:
Additionally, the exterior dimensions (length, width, height) shall be indicated on packages with a minimum of one of the individual dimensions being $>120 \mathrm{~cm}$. The dimensions shall be succeeded by "cm".

Example: $123 \mathrm{~cm} \times 90 \mathrm{~cm} \times 80 \mathrm{~cm}$ or
$(123 \times 90 \times 80) \mathrm{cm}$
2.3.12
2.3.13
2.3.14

Limited storage life
Supply items with limited storage life fall under storage life categories I and II.
Articles in storage life category I
are supply items that are no longer useable after their expiration date.

Such packages shall be marked as follows:
Manufacture and Expiration
(indication of month and year)
Example: HERST 8/93 VERFALL 8/98
(MANUFACTURE 8/93 EXPIRATION 8/98)
or date of vulcanization and expiration
(indication of quarter and year)
Example: VULK 3093 VERFALL 3998
(VULCANIZATION $3^{\text {rd }} Q 93$ EXPIRATION $3^{\text {rd }} Q 98$ )
If a package contains supply items with differing dates of manufacture or vulcanization, the earliest date shall be indicated.

Articles in storage life category II
are supply items the prescribed storage life of which may be extended provided that they are inspected and/or repaired in accordance with the applicable technical specifications and other instructions.

Such packagings shall be marked as follows:
Date of manufacture and inspection
(indication of month and year)
Example: HERST 8/93 PRÜF 8/98
(MANUFACTURE 8/93 INSPECTION 8/98)
or
date of vulcanisation and inspection
(indication of quarter and year)
Example: VULK $3 Q 93$ PRÜF $3 Q 98$
(VULCANISATION 3rd Q 93 INSPECTION 3rd Q 98)
When marking, sufficient space shall be left for other inspection data. This space will be used for the indication of the new date of inspection determined after inspection and deletion of the original date.

If a package contains supply items with differing dates of manufacture or vulcanization, the earliest date shall be indicated.

Marking signs

Graphical signs in accordance with DIN 55402-1 for marking for safe handling, transportation, reloading and storage of packages.

Information signs

Plates or signs for indicating e.g.:

- ionizing radiation
warning sign in accordance with DIN 25400
- Material protection method 6 (desiccant)
plate in accordance with TL 9905-0040 for packages packed in accordance with material protection method 6, for packages packed in accordance with a material protection method 6 (with desiccant).

| 2.4 | Marking of packed, incomplete equipment or sets |
| :---: | :---: |
|  | In case of advance written agreement of the purchaser for the delivery of an incomplete equipment or an incomplete set, all parts missing in a package shall be indicated together with their stock numbers and supply item names in an accompanying "list of missing parts". The packages shall be marked additionally with "incomplete". |
|  | In case of a follow-up shipment of the missing articles, the packages shall be marked additionally with: |
|  | "Part of set/equipment..." (material planning number, stock number and supply item name) |
|  | "Order No.: ..." |
|  | The articles of the follow-up shipment shall be indicated in the packing lists as final shipment. |
|  | Such final shipment lists shall show: stock number, supply item name, quantity and unit of supply. One list each is to be placed in the package and attached to the delivery note. |
| 2.5 | Location of marking |
| 2.5.1 | Unit and intermediate packages |
|  | Flat packages shall be marked on the upper side, cuboidal packages on one of the sides with the longest edge as well as on the adjacent left front side - always beginning on the upper left. |
| 2.5.2 | Shipping package |
|  | The array of the marking shall correspond to the figures of Annex B. |
| 2.6 | Packing lists |
|  | For all multipart equipment and sets consisting of individual articles with different stock numbers but marked by a single stock number, a packing list shall be prepared. This list shall be put into a bag according to TL 8105-0017 which shall be attached to the outside of the package and subsequently protected by means of the cover for packing list bags in accordance with DIN 55467-AL (TL 8135-0022). |
|  | If required by contract, an additional packing list shall be placed into the package well visible on top of the contents. Individual parts, accessories or attachment parts without stock number shall be identified according to the manufacturer's part numbers and listed in the respective packing list. |
| 2.7 | Marking with AIT elements |
|  | All packed products shall, on principle, bear the AIT element marking in accordance with TL A-0032 Part 1 on their packaging. Data transfer is administered there in TL A-0032 Part 5 . |
| 2.8 | Transport |
|  | ```GS1 Serial Shipping Container Code (SSCC) is a worldwide and distinct number for the identification of shipping units (e.g. pallet, container, cardboard box etc.) for transport. (see Annex C)``` |
|  | The definition of the GS1 1 Serial Shipping Container Code (SSCC) for the identification of a shipping unit as well as a respective data transfer means for the SSCC shall be agreed as additional contract regulations via the military authority responsible for materiel with respect to operational readiness in the Bundeswehr / project officer. |
| 2.9 | Standard for wooden packaging |
|  | Only heat-treated wood in accordance with ISPM No. 15 may be used for wooden packaging. Only registered companies may produce the wooden boxes. |

Branding irons shall be used for marking (see figure).

3.3

QUALITY ASSURANCE

Quality inspection
No specific requirements.
It is presupposed that the contractor ensures the fulfilment of the technical requirements by conducting item-related delivery acceptance tests and documenting the results (refer to 3.2 ).

Contractor quality control

The contractor shall inspect the supplies/services for compliance with the contract and document the result.
Testing the readability conformity and the data contents for compliance with GS1 standard may be performed either by GS1 Germany certification or by means of a test medium qualified for this inspection.

Quality assurance
Not applicable, unless otherwise specified in the contract.

In case of packaging subject to government inspection, its marking shall also be subject to government inspection since marking is considered part of the packaging.

## Annex A

Definition of packaging: Packaged supply item
A distinction is made between:

1. Unit package: smallest package with marking applied, containing the same supply item either individually or containing several items of the same kind.
2. Intermediate package: a combination of a certain number of unit packages of the same supply item for better handling.
3. Shipping package: package (individual package or combination of a number of unit packages or intermediate packages) that are ready for shipment without any additional packaging.

## Table A 1

Packing levels

A,11, "Defined type of storage and period of storage, also outdoor."
B,11, "Storage in closed rooms, defined period of storage."

C,11, Temporary storage in closed rooms.
H,11, "Commercial packaging, no storage, immediate putting into use/operation."

T,11, "Transport packaging, no storage, direct packaging performed in a Bundeswehr preservation and packaging facility"

1,12, "Inner packaging A, Outer packaging B"
2,12, "Inner packaging A, Outer packaging C"
3,12, "Inner packaging $A$, Outer packaging $H$ "
4,12, "Inner packaging $B$, Outer packaging C"
5,12, "Inner packaging $B$, Outer packaging $H$ "
6,12, "Inner packaging $C$, Outer packaging $H$ "

7,12, "Inner packaging $H$, Outer packaging $A$ "
8,12, "Inner packaging $H$, Outer packaging $B$ "
9,12, "Inner packaging $H$, Outer packaging C"
A,12, "Inner packaging A, Outer packaging A"
B,12, "Inner packaging $B$, Outer packaging $B$ "
C,12, "Inner packaging $C$, Outer packaging $C$ "
H,12, "Inner packaging $H$, Outer packaging $H$ "
T,12, "Inner packaging $T$, Outer packaging $T$ "

Table A 2

Marking requirements for unit, intermediate and shipping packages

| Type of marking | Unit <br> package | Inter- <br> mediate <br> package | Shipping <br> package |  | Paragraph |
| :--- | :---: | :---: | :---: | :---: | :---: |

Table A3

Sequence of marking data
(see marking examples in Annex B)


## Annex B,

## Examples for marking

Figure B1
Marking of a crate packing

(A) Data concerning the supply item and the packaging
(B) Contract data
(C) Shipment data
(D) Marking symbol
(F) AIT element (bar code)-
(G) ISPM No. 15 - Wooden packaging

## Figure B2

Marking of a cylindrical package (Hobbock)

(A) Data concerning the supply item and the packaging
(B) Contract data
(C) Shipment data
(F) AIT element

Figure B3
Marking of various packages (Extract from STANAG 4281) IDENTIFICATION



Figure 4-1 Sensitive Electronic Devices Caution Labels

## Figure B4

## Marking of various packages (Extract from STANAG 4281)





Figure 2 - 3 Bar Code Markings (continued)

## Figure B5

Marking of a pallet load

(A) Data concerning the supply item and the packaging
(B) Contract data
(C) Shipping data
(F) AIT element

## Anhang C

Shipping Unit Number

## Nummern der Versandeinheit (NVE / SSCC)

| ReserveZiffer | Basisnummer der GLN | vom Versender zu vergebende, fortlaufende Nummer | Prüfziffer |
| :---: | :---: | :---: | :---: |
| 3 | 4012345 | 123456789 | 5 |
| 3 | 42123456 | 12345678 | 0 |
| 3 | 431234567 | 1234567 | 6 |

## Glossary:

Reserve-Ziffer - reserve number
Basisnummer der GLN - basic number GLN (Global Location Number)
Vam Versender zu vergebende, fortlaufende Nummer - number continued, to be assigned by the sender Prüfziffer - Test figure

The number of the shipping unit (NVE - Shipping Unit Number / international: SSCC - Serial Shipping Container Code) plays a major part in the transport field and in future it will be used as a key element in the tracking / tracing back of transport units.

The NVE / SSCC is also derived from a GLN. Once assigned by the sender, it can be used by all those involved in the transport chain, e.g. for complete "Tracking \& Tracing" as well as efficient product recalls.

Just like the GLN and GTIN (Global Trade Item Number), the shipping unit number a purely numeric data element. It has 18 digits:

Reserve figure:
1-digit reserve number, a non-descriptive reserve figure which allows the numeric capacity of both the NVE / and the SSCC to be increased by factor 10.

Basic number:
The 7-digit to 9 -digit basic number is derived from the GLN. It ensures the uniqueness and worldwide non-interference of NVE / SSCC. The length of the basic number defines the numeric capacity which is available to the user.

Consecutive numbers:
The sender has 9, 8 or 7 digits (depending on the length of the basic number) for his continuous numbering of his shipment units at his disposal. This allows him to generate 1 billion or 100 million or 10 million NVEs / SSCCs. If he uses the reserve number, the respective quota is increased by factor 10.
There are no regulations with respect to how to define the individual positions. In practice, it was useful to assign the number in series, i.e. as a mere counting number.

Check digit:
A check digit based on the previous 17 digits concludes the number. The check digit calculation follows the same rules as for the GLN and the GTIN.

In total, reserve number, basic number, continuous numbering and check digit shall always represent 18 digits.

In the context of logistic processes, i.e. transport units which are marked with an NVE / SSCC, the GS1 DataMatrix is not admissible. Here, the use of GS1-128-bar code (Strichcode) is the prime option.

Example of the conversion of a transport label for the identification of a transport unit by means of NVE / SSCC 340123450000216753

Figure C1

Transport label with shipping unit number NVE / SSCC 340123450000216753


Glossary:
Strichcode mit NVE - bar code with shipping unit number

The height of the bar code used for the shipping unit number (NVE / SSCC) is defined to be 31.75 mm as a rule.

Figure C2
Transport label with shipping unit number NVE / SSCC 340123450000216753

GS1-128-bar code example for transport unit
(GS1-128-Strichcodebeispiel für Transporteinheit) :

(00)340123450000216753


[^0]:    ${ }^{1}$ In order to avoid the import of wood pest many countries apply phytosanitary standard ISPM 15.

