



Standardization for Defence Procurement – European Handbook	
CEN Workshop 10	July 2005 v1

Recommendations issued by Expert Group 5 “Packaging”
on their selection of standards



CEN WS 10 Standardization for Defence Procurement

Expert Group on Packaging

(EG 5)

Final Report

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Annex

1. Background

The harmonization of the supply process and especially of the standards and specifications which are applied during procurement is necessary. Three years ago the European Commission placed a mandate that means a working task with the European Standardization Organization CEN to compile and to compare the existing militarily relevant standards and to make suggestions for a harmonization.

Thereby a hierarchy of the standards was fixed: International civil standards are prior to international military specifications at the same appropriateness and national civil respectively military standards are only to be used if the international documents are not sufficient in a specific case. In future such national standards are to be transferred into European or international standards.

This ambitious task has been distributed on different expert groups. First the representatives of the national ministries of defence collected the standards applied in their sectors and compiled them in a common data base.

Then eight priority fields of action had been selected; one of them is the packaging of defence products. Each of the eight expert groups had the task to screen the corresponding relevant standards of this data collection, if necessary to complete the data base or to delete standards from it. Criterion for the selection process was the practical significance of a standard.

2. Goal and Motivation

Therefore the standards were grouped in so-called general (horizontal) and specific (vertical) standards:

General standards describe packing process.

Specific standards are product relevant standards which have a restricted scope only for the corresponding packaging or product.

This study has its focus on packing himself and not on testing and engineering of the packaging. The comparison of these standards is listing the scope, the technical content and the limitations of each standard under consideration.

Many specifications of products may include packaging requirements affecting quality, reliability and service life.

The limitation of this investigation is marked by the approach via military needs. Many similar standards have been developed in the past for civilian products (for example 40 feet container) and quite a large number of standards are existing which were not regarded because of the lack of knowledge about these documents.

3 Reduction Process

3.1 Preliminary List of Documents

At the start of the work Expert Group 5 was supplied with a preliminary list of documents. This list had been generated by WS 10 as an outcome of its phase 2 activity. The initial list comprised around 11500 documents, however, (and not very helpfully) a number of separate additional lists were also supplied. As the entire listings of documents were far too large to handle, it was subject to preliminary search to produce a subsidiary list of around 500 packaging related standards.

This was reviewed and several facts were noted:

- The lists contained a mix of both specific (product related) and general (no product specific) standards.**
- The lists contained fewer commercial standards than expected. Based upon the minutes of WS10 an exception existed that the listings would specifically include a number of commercial standards.**

3.2 Identification of General Standards

The Expert Groups took as its first priority to identify the general standards relating to packing. Most standards organisations, whether commercial or military, usually include a number of general standards which are used as building blocks for the specific, product related, and standards.

The vast majority of standards organisations maintained standards on packing in their general group. Further more there are general standards for certain aims such packaging and marking of ammunition. Specific, product related, standards commonly adopt the general standards. The most of product related standards are older than the general standards and not in common practice.

Initially four separate general standards were identified as primary sources:

- NATO Defence Standard STANAG 4280
- French National Defence Standard GAM EMB 1 to 5
- UK National Defence Standard Def Stan 81 - 41 part 1 to 6
- German TL 8100 - 0100, part 001 to 007

Further general Standards for certain aims

- NATO Defence Standard STANAG 4281
NATO standard marking for shipment and storage
- NATO Defence Standard STANAG 4340
NATO standard packaging test procedures
- UK National Defence Standard Def Stan 08 - 10 part 1 to 21
Marking of ammunition and associated packages, General (part 1)
- German TL A 0032, part 1 and 2
Packaging Marking of Packages
Packing Levels S, A, B, C (part 1) H, T (part 2)
- EN 13193
Packaging - Packaging and the Environment – Terminology
- ISO 16104
Packaging - Transport Packaging for Dangerous Goods - Test Methods

3.3 Comparison of General Standards

Three national and one NATO standard were considered a manageable number to allow a comparison exercise to be undertaken. The first obvious point was that all the national general standards were dividing in several parts, which could have been a hint to a common origin. The Expert Group reviewed the general standards.

NATO Defence Standard STANAG 4280

NATO Levels of Packaging, ED 2, 1999-02-08

Aim is to establish NATO levels of packaging.

French National Defence Standard GAM EMB 1 to 5

GAM EMB 1, 1996-01-01

Conditions generals de definition, de realisation et de controle des emballages applicables aux marchés et commandes de matériels destinés au MINDEF.

UK National Defence Standard Def Stan 81 - 41 part 1 to 6

Gives the package designer with information about the MoD requirement for packaging items of equipment and spares, defines the various types and levels of packaging used and outlines the requirements for premises, transport, handling and storage.

The national standard is referring the STANAG 4280.

German TL 8100 - 0100, part 001 to 007

Packaging material protection by means of preservation and packaging – packaging levels S, A, B - (NATO-1, 2, 3)

The national standard is based on the STANAG 4280.

3.4 Treatment of Specific Standards

The Expert Group could not compare the general standards because of its number and the strong connection to the specific products. So the vertical standards are only listed.

The Expert Group 8 comparison exercise has included a review of tests which are also intended for packages as well as a number of procedures that are solely intended for packages. All the known military packaging test procedures are derivative of the general test procedures already reviewed by EG 8.

A caveat to this is that a few packaging test procedures are very old fashioned and have been long superseded in the general tests.

3.5 Overview to Packaging Related Standards

Total	458
Added by EG 5	57
General	22
General, certain aim	90
Specific	346
Mil	407
Civil	51
NATO	23
French	8
UK	236
German	166
Sweden	3
Norway (not in EG 5)	4
Spain (not in EG 5)	none
Italy	none
US (MIL-STD, adds by different countries	16

4 Recommendations

EG 5 recommends the use of the preferred general standards on packaging as listed in the handbook (see appendix).

Further Harmonization of the national standards, based on the international standards. The use of international standards shall be encouraged while the use of national standards shall be discouraged.

The use of civil standards, especially for the specific, product related standards shall be encouraged while the use of military standards shall be discouraged where possible.

Harmonization of logistic-concepts, due to the huge influence on both general and specific packaging standards.

Cooperation with industries and standardization-institutes concerning the topicality of the database.

5 Conclusions

With the release of Stanag 4280 and the adaptation in the national standards, the harmonization of the general standards for packaging is on its way.

458 standards with relevance for packaging were found in the initial database and added references or added by EG5.

The amount of general standards even with these for certain aims is a manageable sizes whether there a no contradictions.

The large number of specific standards, related to the variety of products to be packed, should be further reduced. Therefore the use of the handbook for the standards, a database of packages in use and a common logistic concept would be helpful.