European Aviation Safety Agency

European Technical Standard Order

Subject: Cargo Pallets, Nets and Containers (Unit Load Devices)

1 - Applicability
This ETSO gives the requirements which Cargo Unit Load Devices that are manufactured on or after the date of this ETSO must meet in order to be identified with the applicable ETSO marking.

2 - Procedures
2.1 - General
   Applicable procedures are detailed in CS-ETSO Subpart A.
2.2 - Specific
   None.

3 - Technical Conditions
3.1 - Basic
3.1.1 - Minimum Performance Standard

   When using NAS 3610 Revision 10, the following errors must be corrected:
   - in lieu of Figure 31, sheet 87, substitute Figure 31, sheet 88;
   - in lieu of Figure 31, sheet 88, substitute Figure 32, sheet 87 of NAS 3610 Revision 8 dated April 1987

   For new models of Type II ULDs standards set forth in the Society of Automotive Engineers, Inc. (SAE) Aerospace Standard (AS) 36100, “Air Cargo Unit Load Devices - Performance Requirements and Test Parameters”, Revision A, dated April 2006.

   For Type I and II ULDs, the standards set forth in SAE AS 36102, Air Cargo Unit Load Devices - Testing Methods, dated March 2005 are applicable.

3.1.2 - Environmental Standard
See CS-ETSO Subpart A paragraph 2.1.

3.1.3 - Computer Software
None

3.1.4 - Electronic Hardware Qualification
None

3.2 - Specific

Environmental degradation due to ageing, ultra-violet (UV)-exposure, weathering, etc. for any non-metallic materials used in the construction of pallets, nets and containers must be considered.

In lieu of NAS 3610 Rev. 10, paragraph 3.7 and SAE AS 36100 Rev. A, paragraph 4.7 use the following paragraph which provides the fire protection requirements for ULDs:

The materials used in the construction of pallets, nets and containers must meet the appropriate provisions in CS-25, Appendix F, Part I, paragraph (a)(2)(iv).

Textile Performance: See SAE Aerospace Information Report (AIR) 1490B, Environmental Degradation of Textiles, dated December 2007, for available data for textile performance when exposed to environmental factors. These data shall be taken into account for consideration of the effects of environmental degradation on nets commensurate with the expected storage and service life to satisfy SAE AS 36100 Rev. A, paragraph 4.11.

NOTE: Environmental degradation data other than that documented in AIR1490B may be used if substantiated by the applicant and approved by EASA.

None

3.2.1 Failure Condition Classification
N/A

4 - Marking

4.1 - General

Marking is detailed in CS-ETSO Subpart A paragraph 1.2.

4.2 - Specific

In addition, the following information shall be legibly and permanently marked on the ULD:

1. The identification of the article in the code system explained in
   a. NAS 3610, Revision 10, paragraph 1.2.1, for Type I ULDs.
   b. SAE AS 36100, Rev. A, paragraph 3.5 for Type II ULDs.
2. The nominal weight of the article in kilogram and pound in the format: Weight: ...
3. If the article is not omni-directional, the words “FORWARD”, “AFT”, and “SIDE” must be conspicuously and appropriately placed.
4. The manufacturer’s serial number of the article, with the option to add the date of manufacture.
5. The burning rate determined for the article under paragraph 3.2 of this ETSO.
6. If applicable, the expiration date in the format “EXP YYYY-MM” must be marked on the ULD.

5 - Availability of Referenced Document

See CS-ETSO Subpart A paragraph 3.