Packaging Material Design for Lead Non-spillable Batteries

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01 Introduction
This document contains Ericsson’s packaging requirements for wet non-spillable batteries which are classed as: UN 2800, batteries, wet, non-spillable, exempted dangerous goods on all transport modes.
A UN type approved package is not required for wet non-spillable batteries.

02 Legal and sustainability

Banned and restricted substances
ID: 105 65-1007/09693_D

Description: Packaging material must comply with all requirements in the Ericsson list of banned, restricted, and observation substances, 2/00021-FAU 104 04

ID: 105 65-1007/11392_B


Treatment of packaging made from wood
ID: 105 65-1007/09696_D

Description: All packaging made from wood must be treated and marked in accordance with the ISPM 15 standard. This also ensures compliance with EU legislation (Commission Directive 2004/102/EC.)

All packaging materials made partly or completely from wood must be bark free, HT/KD treated and correctly marked (marking, see 105 65-1007/09772).

Clarification: Engineered wood products such as plywood, particle board, etc. are not affected by this regulation.
Dangerous goods - general

ID: 105 65-1007/09699_C

Description: Dangerous goods must be packed, marked and labeled as required by international standards and regulations for the transport of dangerous goods.

Ericsson's requirements for packaging, marking and labeling of dangerous goods are stated in EAB-13:001236: "Requirements for packaging, marking and labeling of dangerous goods".

This document includes and refers to requirements for:
- Design and construction of packaging for dangerous goods
- General packaging instructions for dangerous goods
- Marking and labeling for packaging containing dangerous goods and exempted dangerous goods

This document also contains contact information for Ericsson DGR support.

03 Packaging fitness for purpose - UN 2800

Packaging material quality

ID: 105 65-1007/11438_B

Description: Non-Spillable Batteries must be packed in good quality packagings which shall be strong enough to withstand the shocks and loadings normally encountered during carriage, including transshipment between transport units and between transport units and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling.

Retention of content during transport

ID: 105 65-1007/11969_A

Description: Packagings must be constructed and closed so as to prevent any loss of contents when prepared for transport which might be caused under normal conditions of transport by vibration or by changes in temperature, humidity or pressure (resulting from altitude, for example).

Closed package condition

ID: 105 65-1007/11970_A

Description: Packagings must be closed in accordance with the information provided by the manufacturer. No dangerous residue shall adhere to the outside of packagings during carriage. These provisions apply, as appropriate, to new, reused, reconditioned or remanufactured packagings.

Closure mechanism robustness

ID: 105 65-1007/11971_A

Description: The body and the closure of any packaging must be so constructed as to be able adequately resist the effects of temperature and vibration occurring during normal conditions of transport. The closure device must be so designed that it is unlikely that it can be incorrectly or incompletely closed and must be such that it may be checked easily to determine that it is completely closed; and that it remains closed during transport.

Properly secured

ID: 105 65-1007/11972_A
Description: Batteries must be secured in such a way that they cannot become displaced, tip over or be damaged.

Short circuit protection
ID: 105 65-1007/11737_A

Description: Cells and batteries must be protected so as to prevent short circuit. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.

04 Pallets

Pallet robustness
ID: 105 65-1007/11900_B

Description: Pallets must be sufficiently robust to allow handling by forklift and pallet truck as well as storage in standard pallet racking when fully loaded. Product specific pallets must be designed for the load they will carry, general pallets must be designed with a carrying capacity of 400 kg. For compliance, pallets must be able to meet the requirements in Ericsson pallet test specification 8/002 01-5/FEA 101 8233. Note that a safety factor of 2 must be used for pallet bending (racking) and bottom deck bending tests.

Pallet design
ID: 105 65-1007/11901_A

Description: Pallets must be designed for ease of handling and storage:

- General pallets must conform to international standard pallet dimensions 1200 x 800 mm (EU pallet) or 1160 x 760 mm (container pallet). Exceptions must be agreed with Ericsson.
- Pallets must be designed for four-way handling (fork entry possible from all four directions). Exceptions must be agreed with Ericsson.
- Fork entry dimensions on all four pallet sides must be according to standard EU pallet dimensions (1200 x 800 mm). Exceptions are permitted for very narrow pallets (long sides must have standard EU pallet fork entry dimensions; short sides must be of standard height but may have narrower than standard EU pallet fork entry dimensions).
- The package footprint must not extend over the pallet edges. Allowance must be made for package bulging.

05 Safe handling

Steel strapping
ID: 105 65-1007/09708_B

Description: Steel strapping must not be used because of the risk of bodily injury. Polyester strapping is recommended.
06 Transport environment

Wetting resistance
ID: 105 65-1007/11957_A

Description: The outer transport packaging of products that will be handled in outdoor environments without additional protection must have sufficient wetting resistance to allow proper handling and provide product protection during precipitation.

07 Package marking

ISPM15 Phytosanitary Marking
ID: 105 65-1007/09772_C

Description: Marking on wooden packaging treated according to ISPM15 must comply with the requirements of the standard. A detailed description of the required making is given in 102 01-3210.

Important note: The marking must always be complete and all parts of the marking must be visible and readable.

Required Marking
ID: 105 65-1007/11393_A

Description: 3PP products must be marked according to Marking Requirements in 1055-101, External Products and Product Packages (3PP/OEM).

Marking for batteries lead non-spillable
ID: 105 65-1007/11441_B

Description: Each single package must be marked with "Batteries – non-spillable" or "Non-spillable"

When shipped as an overpack, all dangerous goods marking (e.g. "Non-spillable") must be repeated on the overpack unless the marking on every individual single package is visible. The overpack must be marked with "Overpack" with a minimum text height 12 mm.

The "Non-spillable" marking must always be clearly visible on the packaging. It must not under any circumstances be hidden by, e.g. shrink wrap, strapping or similar.

Recycling marking of packaging materials
ID: 105 65-1007/09771_D

Description: Packaging materials must be marked with materials identification according to marking instruction 102 01-3210.
08 Required documentation

Documentation required from external suppliers

ID: 105 65-1007/11205 rev B

Description: The following packaging documentation must be submitted as a TDP folder based on template 3/190 09-2/FEA 101 8233. The TDP folder consists of 7 folders describing the information requirements that must be fulfilled before the packaging set can be released:

Folder 1: For submitting "Packaging material statement of conformity" - template in folder
Folder 2: For submitting BoM and packaging instruction – instructions in folder
Folder 3: For submitting packaging drawings – instructions in folder
Folder 4: For submitting pallet loading information – instructions in folder
Folder 5: For submitting labelling information – instructions and template in folder
Folder 6: For submitting transport test report – instructions in folder
Folder 7: Instructions for completing materials declaration – submitted by email to Ericsson system