



Guidance on the implementation the SOLAS VI Regulation 2 amendment requiring the verification of the gross mass of packed containers

Notice to all Ship Owners, Ship Operators and Managers, Masters and Officers of Merchant Ships, Agents, Charterers, Cargo Packers, Cargo Consolidators, Hauliers, Freight Forwarders, Shippers, Consignors, Training Providers, Inspectors of Cargoes, Port Authorities, Terminal Operators and others involved in the transport of containers

Summary

This MGN outlines the legal position in the UK with regard to the recent amendment to SOLAS VI which take effect from 1st July 2016. It also signposts detailed guidance for UK shippers, terminals/ports and carriers on implementing the SOLAS VI provisions.

1. Introduction

1.1 Following the concerns raised by the shipping industry regarding the mis-declaration of the declared gross mass of packed containers SOLAS Chapter VI Regulation 2 has been amended, to address those concerns. .

2. Insert subject heading

2.1 The amendment to SOLAS VI Regulation 2 which comes into force 1st July 2016 expands on how the gross mass of cargo carried in units must be verified. This amendment give shippers two possible options for deciding which method to use for obtaining such an accurate gross mass.

2.2 No change is required to Regulation 4 of The Merchant Shipping (Carriage of Cargoes) Regulations 1999 S.I. 1999 No.336, as it already places a requirement on the shipper to provide the owner or master with the gross mass of the cargo units sufficiently in advance of loading of that unit on board a ship and this amendment to SOLAS would not amend this requirement.



2.3 The document annexed to this MGN gives detailed advice on how UK shippers, ports/terminals and carriers can meet their responsibilities under this SOLAS amendment.

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Annex to MGN530

United Kingdom guidelines on Container gross mass (weight) verification

Summary

This document outlines the UK guidelines for the implementation of the mandatory amendments to the International Convention for the Safety of Life at Sea (SOLAS) Chapter VI, Part A, Regulation 2 - Cargo information which were adopted November 2014. The SOLAS amendment places a requirement on the shipper of packed containers to verify and provide the container's gross mass to the carrier¹ and terminal representative prior to it being loaded onto a ship.

Contents

1	Introduction	Page	2
2	Definitions	Page	2
3	Scope	Page	2
4	Main Principles	Page	3
5	Methods for obtaining the verified gross mass of a packed container	Page	3
6	Documentation	Page	4
7.	Information flow within the supply chain – shipper-carrier interface	Page	5
8	Discrepancies in gross mass	Page	5
9	Containers exceeding their maximum gross mass	Page	5
10	Empty containers	Page	5
11	Contingencies for containers received without a verified gross mass	Page	5
12	Reporting of non-compliances	Page	5
13	Enforcement	Page	6

List of Annexes

Annex 1	Definitions
Annex 2	Method 2 Application Process to MCA
Annex 3	Methods for obtaining the verified gross mass Certification and Approval Procedures
Annex 4	Miscellaneous including Case studies

¹ 'Carrier' is used as a term to cover the 'master or his representative' as in SOLAS Chapter VI regulation 2



1 Introduction

1.1 As a result of incidents, published reports and concerns from carriers and others within the transport supply chain, the International Maritime Organization (IMO) has recognised and discussed the problems associated with freight containers, structural issues², packing³, their packed gross mass (mis-declared cargo weights) and how they are secured on to the ship, for over seven years. Following the discussions at previous IMO sub-committees involving many governments and industry organisations, in November 2014 the IMO's Maritime Safety Committee meeting (MSC 94) adopted the changes to the Safety of Life at Sea (SOLAS) Convention Chapter VI Regulation 2 – Cargo information⁴ regarding a mandatory container gross mass verification together with associated guidelines published as MSC.1/Circ.1475⁵. It should be noted both the SOLAS text and the Guidelines were produced as a result of open discussions, based on proposals agreed between both governments and trade bodies to address the recognised and documented safety issues whilst minimising the impact on participants within the supply chain.

1.2 The effect on the supply chain is that the verification of the gross mass of containers will be required before packed containers are placed aboard ships, see paragraph 3 Scope. The supply chain is a complex and dynamic system consisting of a number of different companies that work in succession to produce, transport and deliver goods from the supplier to the customer. To ensure compliance with these SOLAS provisions, participants within the supply chain should agree amongst themselves the processes necessary to ensure that the weights are available prior to the packed container being loaded aboard the ship. .

1.3 The SOLAS provisions were adopted in November 2014 and will enter in to force date on 1st July 2016, the intervening period should be considered to be the transition period.

1.4 These Guidelines have been drafted following discussions between the relevant UK trade bodies together with the Department for Transport (DfT), the Office of Rail Regulation (ORR), the Health & Safety Executive (HSE), the Driver & Vehicle Standards Agency (DVSA) and the Maritime & Coastguard Agency (MCA) and form the basis of UK industry and Government advice on implementing the provisions of SOLAS. The Guidelines also identify elements of a non-regulatory nature which those with differing commercial roles and activities within the transport supply chain may need to consider.

2 Definitions

It is important to ensure consistency to use the definitions as used in MSC 1/Circ.1475 which are reproduced in Annex 1.

² Resolution MSC. 355(92) [http://www.imo.org/KnowledgeCentre/IndexofIMOResolutions/Pages/Maritime-Safety-Committee-\(MSC\).aspx](http://www.imo.org/KnowledgeCentre/IndexofIMOResolutions/Pages/Maritime-Safety-Committee-(MSC).aspx)

³ ILO/IMO/UNECE CTU Code <http://www.unece.org/trans/wp24/guidelinespackingctus/intro.html>

⁴ SOLAS text see Annex 4

⁵ MSC 1/Circ.1475 <http://www.imo.org/OurWork/Circulars/Pages/IMODOCS.aspx>



3 Scope

3.1 Unless specified in paragraph 3.2, the SOLAS requirements to verify the gross mass of a packed container apply to all containers to which the CSC applies, and which are to be stowed onto any ship and are given force of law through the Statutory Instruments 1999 No. 336 the Merchant Shipping (Carriage of Cargoes) Regulations 1999. These guidelines apply in relation to export consignments from the UK; the gross mass of inbound containers will have either been verified in the country of loading or through prior agreement between shipper and carrier.

3.2 The provisions of SOLAS Chapter VI, Part A, Regulation 2 do not apply to:

- (i) A packed container on a chassis or trailer to be driven on a ro-ro ship which engaged on short international voyages⁶.
- (ii) Cargo items tendered by a shipper to the master for packing into a container already on board the ship.
- (iii) "Offshore containers" to which the CSC, according to the *Guidelines for the approval of offshore containers handled in open seas* (MSC/Circ.860) and the *Revised recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended* (CSC.1/Circ.138/Rev.1), does not apply.

3.3 Where the application of a trade provision is specified in a contract of sale and there is any conflict between the trade provision and SOLAS, SOLAS takes precedence.

4 Main principles

4.1 The responsibility for obtaining and documenting the verified gross mass of a packed container lies with the shipper.

4.2 A container packed with packages and cargo items should not be loaded onto a ship to which the SOLAS regulations apply unless the master or his representative and the terminal representative have obtained, in advance of vessel loading, the verified actual gross mass of the container.

4.3 The purpose of this SOLAS regulation is to obtain an accurate gross mass of packed containers that are moved through the supply chain prior loading aboard the ship.

5 Methods for obtaining the verified gross mass of a packed container

5.1 The SOLAS regulations prescribe two methods by which the shipper may obtain the verified gross mass of a packed container which will be referred to as "Method 1" and "Method 2" in this document.

5.1.1 Method 1:

Weighing the packed container using calibrated and certified weighing equipment (e.g. weighbridges, load cell sensing technologies etc) (see Annex 3)

⁶ SOLAS regulation III/2 defines "short international voyage" as an international voyage in the course of which a ship is not more than 200 miles from a port or place in which the passengers and crew could be placed in safety, and which does not exceed 600 miles in length between the last port of call in the country in which the voyage begins and the final port of destination.



5.1.2 Method2:

Weighing all packages and cargo items, including the mass of pallets, dunnage and other securing material to be packed in the container and adding the tare mass of the container to the sum of the single masses, using a certified method approved by the UK competent authority, that is the Maritime and Coastguard Agency (MCA) or its authorised body⁷.

5.2 It should be noted that for certain types of cargo items (e.g. scrap metal, unbagged grain and other cargo in bulk) it would be inappropriate and impractical to use Method 2 (see 5.5 below).

5.3 Notwithstanding, the requirements of the CTU Code in relation to load distribution should also be followed.

5.4 Approval process for shippers wishing to use Method 2

5.4.1 In order to use “Method 2” SOLAS requires that the MCA has to approve the certified method used by that shipper. Recognising that shippers use differing methods of work and management systems the routes to obtaining approval are:-

1. Businesses holding an accredited Quality Management System (such as ISO 9001 or ISO 28000) or Authorised Economic Operator (AEO) type “S” or “F”, which include documented procedures to satisfy the weighing requirement, will be deemed to have demonstrated their competence to use Method 2. The shipper will be required to submit the relevant procedures along with a copy of the any certificates to the MCA
2. Companies not accredited to one of the above but operating a company management system including Enterprise Resource Planning (ERP), for example SAP, can be approved by the MCA, after checking electronic or documentary submissions
3. Other auditing schemes as approved by the MCA

5.4.2 The actual accreditation process is detailed in Annex 2: and guideline weighing processes are contained within Annex 3.

5.4.3 Companies which successfully become authorised to use Method 2 will be registered on to a UK database, overseen by the MCA. The database will be accessible to approved shippers and to both carriers (shipping lines) and port/terminal operators in order that, if they wish to or suspect a discrepancy exists, it may be confirmed, that particular containers are being presented by companies certified under Method 2, as required,.

5.5 It should be noted that certain types of cargo items (e.g. scrap metal, unbagged grain, and other cargo in bulk) do not easily lend themselves to individual weighing of the items to be packed in the container. In such cases, the usage of Method 2 would be inappropriate and impractical, and Method 1 should be used instead.

6 Documentation

6.1 The SOLAS regulations require the shipper to verify the gross mass of the packed container using Method 1 or Method 2 and to communicate the verified gross mass in a

⁷ In the context of Method 2 issues, any reference to MCA is taken to mean MCA or its authorised body



shipping document. This document can be part of the shipping instructions to the shipping company or a separate communication (e.g. a declaration including a weight certificate produced by a weigh station utilising calibrated and certified equipment on the route between the shipper's origin and the port terminal or in the case of Method 2 the shipper's approval number must be included). In either case, the document should clearly highlight that the gross mass provided is the "verified gross mass". If appropriate, EDI methods can also be used.

6.2 Irrespective of its form, the document declaring the verified gross mass of the packed container should be signed by a person duly authorised by the shipper. The signature may be an electronic signature or may be replaced by the name in capitals of the person authorised to sign it.

7. Information flow within the supply chain – shipper-carrier interface

7.1 The SOLAS text is clear in assigning shippers' and carriers' responsibilities and the role of the terminal. The shipper is responsible for providing a "verified gross mass" to the carrier or their terminal representative, regardless of who actually packs the container. Much complexity exists in the modern supply chain and the process of information flow within the supply chain could be considered to be elements of a non-regulatory nature and they have been included to highlight issues which companies may need to consider, these elements are given in paragraphs 8, 9, 10 and 11.

7.2 In order to ensure the smooth flow of cargo it is essential that information is provided to other parties as early as possible. How this is achieved will be for the relevant parties in the supply chain involved in moving goods to determine. SOLAS requires that the information is submitted sufficiently in advance to be used in the preparation of the ship stowage plan. It is essential that the verified gross mass is obtained before the container is physically loaded on to a ship.

7.3 In its simplest form the information flow regarding the provision of a verified gross mass may look something like the following:-

SHIPPER → SHIPPING LINE → TERMINAL OPERATOR

7.4 As detailed in MSC.1/Circ.1475 paragraph 5.1.2 and 5.1.3, where cargo submitted and correctly marked is tendered by one UK verified weigher to another UK verified weigher for final loading, it will not need to be re-weighed prior to packing into the container although responsibility for providing the accurate verified gross mass remains with the shipper named on the bill of lading. For the purpose of these Guidelines, the arrangement whereby a UK verified weigher does not need to re-weigh cargo submitted for final loading by another UK verified weigher is referred to as the 'handshake' principle

8 Discrepancies in gross mass

8.1 Any discrepancy between a packed container's gross mass declared prior to verification and its verified gross mass should be resolved by use of the verified gross mass.



8.2 If a packed container is weighed at the port terminal facility, that is the gross mass that should be used for ship stow planning.

8.3 In circumstances where a packed container is not weighed at the port terminal facility but the port terminal facility nevertheless identifies that a discrepancy exists regarding the verified gross mass as declared or provided to it, the port terminal facility and the carrier should agree on the steps to be taken to confirm the verified gross mass of the packed container.

8.4 Paragraphs 8.1, 8.2 and 8.3 highlight that the importance of communication between the parties is key and it has to become routine. Carriers should provide cut-off times for ship stowage planning to assist the shipper in ensuring that the verification of the container gross mass and transport to the terminal/port is carried out within the required time frame to avoid the consequences of discrepancies in gross mass, such as not being loaded onto the ship or the ship having to carry out a re-stow. How the information is documented and passed down the line is subject to commercial agreements between the parties and is not a regulatory issue.

9 Containers exceeding their maximum gross mass

9.1 SOLAS regulation VI/5 requires that a container is not packed to more than the maximum gross mass indicated on the Safety Approval Plate under the International Convention for Safe Containers (CSC), as amended. A container with a gross mass exceeding its maximum permitted gross mass may not be loaded onto a ship.

9.2 All parties are encouraged to consider how such non-compliances are identified and rectified.

10 Empty containers

10.1 Shippers and operators of empty containers are encouraged to have practices and arrangements in place to ensure that they are empty. The tare weight will visually appear on the container in accordance with the International Organization for Standardization (ISO) standard for container marking and identification and it should be used in such cases.

11 Contingencies for containers received without a verified gross mass

11.1 Under SOLAS no container without a verified gross mass may be loaded onto a ship. It is for individual carriers and port operators to devise operational procedures to ensure that this regulatory requirement is complied with on all occasions.

11.2 Carriers and Terminal operators should have sufficient documented procedures to demonstrate the manner in which they will be able to achieve this requirement.

12 Reporting of non-compliances

12.1 Any incidence of a mis-declaration of the gross mass of a container arising from the scenarios outlined in paragraphs 8, 9 and 11 and identified by anyone in the supply chain, should be notified to the MCA. See paragraph 13 for the possible enforcement actions. Such incidents may result in the withdrawal of a company's "Method 2" approval from the MCA. See Annex 4 for reporting information



Note: The MCA does not intervene in commercial matters which may arise from non-regulatory issues highlighted in paragraph 7.

13 Enforcement

13.1 It is anticipated that Regulators and other authorised cargo inspectors will use an enforcement threshold $\pm 5\%$ of the verified gross mass of the container. However, this will be used on a case by case basis.

13.2 Businesses taking advantage of the facilitation offered by Method 2 will be required to ensure that the expected levels of compliance are met, proper records kept and that these are made available on request by the MCA.

13.3 Should a business fail to meet the expected standard of an accredited company, the MCA may suspend or revoke the verification agreement thereby prohibiting the company from taking advantage of the Method 2 weighing process until any identified deficiencies have been rectified. Should this occur, further guidance on the requirements to be met by businesses seeking to use Method 2 should be obtained from the MCA.

13.4 The penalties take two forms and these are explained below.

1. Commercial - Repacking costs, administration fees for amending documents, demurrage charges etc.
2. Regulatory - imposed by the MCA based upon statute which in this case are the Merchant Shipping (Carriage of Cargoes) Regulations 1999, as amended: Regulation 13 (1) A person guilty of an offence under Part II (General Provisions, Cargo information), III or IV of these Regulations shall be liable on summary conviction to a fine not exceeding the statutory maximum or, on conviction on indictment, to imprisonment for a term not exceeding two years or a fine or both.

13.5 In the event of an incident or an issue with a container stow as part of Port State Control or an investigation by the Regulator, the carrier and/or their terminal representative should be able to demonstrate that they have systems in place to ensure prior to the loading of packed containers that they have the verified gross mass for each container and that any changes in the container gross mass notified between pre-booking and loading aboard a ship are managed.



Annex 1- Definitions

For the purpose of these Guidelines:

A1.1 Administration means the Government of the State whose flag the ship is entitled to fly.

A1.2 Calibrated and certified equipment means a scale, weighbridge, lifting equipment or any other device, capable of determining the actual gross mass of a packed container or of packages and cargo items, pallets, dunnage and other packing and securing material, that meets the accuracy standards and requirements of the State in which the equipment is being used.

A1.3 Cargo items has the same general meaning as the term "cargo" in the International Convention for Safe Containers, 1972, as amended (hereinafter referred to as "the CSC"), and means any goods, wares, merchandise, liquids, gases, solids and articles of every kind whatsoever carried in containers pursuant to a contract of carriage. However, ship's equipment and ship's supplies⁸, including ship's spare parts and stores, carried in containers are not regarded as cargo.

A1.4 Carrier The party who, in a contract of carriage, undertakes to perform or to procure the performance of carriage by sea.

A1.5 Container has the same meaning as the term "container" in the CSC and means an article of transport equipment:

- (a) of a permanent character and accordingly strong enough to be suitable for repeated use;
- (b) specially designed to facilitate the transport of goods, by one or more modes of transport, without intermediate reloading;
- (c) designed to be secured and/or readily handled, having corner fittings for these purposes; and
- (d) of a size such that the area enclosed by the four outer bottom corners is either:
 - (i) at least 14 m⁹ (150 sq. ft.); or
 - (ii) at least 7 m² (75 sq. ft.) if it is fitted with top corner fittings.

A1.6 Contract of carriage means a contract in which a shipping company, against the payment of freight, undertakes to carry goods from one place to another. The contract may take the form of, or be evidenced by a document such as sea waybill, a bill of lading, or multi-modal transport document.

A1.7 Gross mass means the combined mass of a container's tare mass and the masses of all packages and cargo items, including pallets, dunnage and other packing material and securing materials packed into the container (see also "*Verified gross mass*").



AI.8 Package means one or more cargo items that are tied together, packed, wrapped, boxed or parcelled for transportation. Examples of packages include, but are not limited to, parcels, boxes, packets and cartons.

AI.9 Packed container means a container, as previously defined, loaded ("stuffed" or "filled") with liquids, gases, solids, packages and cargo items, including pallets, dunnage, and other packing material and securing materials.

AI.10 Packing material means any material used or for use with packages and cargo items to prevent damage, including, but not limited to, crates, packing blocks, drums, cases, boxes, barrels, and skids. Excluded from the definition is any material within individual sealed packages to protect the cargo item(s) inside the package.

AI.11 Securing material means all dunnage, lashing and other equipment used to block, brace, and secure packed cargo items in a container.

AI.12 Ship means any vessel to which SOLAS chapter VI applies. Excluded from this definition are roll-on/roll-off (ro-ro) ships engaged on short international voyages² where the containers are carried on a chassis or trailer and are loaded and unloaded by being driven on and off such a ship.

AI.13 Shipper means a legal entity or person named on the bill of lading or sea waybill or equivalent multimodal transport document (e.g. "through" bill of lading) as shipper and/or who (or in whose name or on whose behalf) a contract of carriage has been concluded with a shipping company. The shipper may also be known as the sender.

AI.14 Shipping document means a document used by the shipper to communicate the verified gross mass of the packed container. This document can be part of the shipping instructions to the shipping company or a separate communication (e.g. a declaration including a weight certificate produced by a weigh station).

AI.15 Tare mass means the mass of an empty container that does not contain any packages, cargo items, pallets, dunnage, or any other packing material or securing material.

AI.16 Terminal representative means a person acting on behalf of a legal entity or person engaged in the business of providing wharfage, dock, stowage, warehouse, or other cargo handling services in connection with a ship.

AI.17 Verified gross mass means the total gross mass of a packed container as obtained by one of the methods described in paragraph 5.1 of these Guidelines. (see also "gross mass").



Annex 2-Method 2 Application Process to Maritime & Coastguard Agency (MCA)

A2.1 The MCA is responsible for approving, through the process described below, the suitability of businesses seeking accreditation and ensuring that the process fully conforms to the requirements of SOLAS as amended.

A2.2 The process must provide / ensure a satisfactory level of security for all cargo to be packed in containers

Application procedure

A2.3 Applicants need to submit the following as part of their application:

- Full Company name and head office address
- Addresses where verified weighing will be undertaken
- Name(s) of responsible person(s) Operations Director / Logistics Personnel etc

A2.4 Additional elements of a Documented Procedure for a “Method 2” Shipper:

- Specifying / describing the weighing method to be used
- Detailing what weighing equipment is to be used as part of the documented procedure
- Equipment maintenance procedures
- Calibration procedures (including whether there are periodic internal checks)
- Discrepancy procedure
- Reporting and quarantining of faulty equipment
- Record retention
- Training
- Copy of certificates where processes are already audited as part of a Quality Management System

The process

A2.5 For those companies without audited and certified procedures, if the preliminary details supplied by the applicant are considered satisfactory, the appropriate authority conducts (or arranges that an approved third party conducts) an on-site verification of the implementation, effectiveness and auditability of the weighing measures in place.

A2.6 Following a successful verification visit the trader is considered to be an approved shipper for a period of time not exceeding 2 years and its name added to the official verification of container gross mass database administered by the MCA. The MCA (or the appointed Government department) continues its oversight of the process in order to ensure that it is updated as required and that all approved shippers maintain the level of implementation of their roles and safety responsibilities throughout the period of validity of their approval. To do so, the MCA may require the provision of information or documents and to conduct on-site inspections/spot-checks.

A2.7 For those companies with a documented and externally audited system the MCA will check the documents to ensure their compliance with the requirements of the regulations. On a



risk basis the MCA will determine whether or not they believe that the procedures comply with regulatory requirements. If they meet the requirements the relevant approval will be issued. The MCA will investigate any discrepancies including conducting an audit if required.

A2.8 The MCA will issue an authorisation number to the verified shipper which will be recorded on a central database. The authorisation format will be as follows:-

- 1234/GB/12AA
 - 1234-the sequential number issued by the MCA to the approved weigher
 - GB-Country of issue
 - 12AA Expiry date of the above approval)

A2.9 Details will be recorded on a central database administered by the MCA and access details provided to authorised parties

Revocation of Approval

A2.10 When a mis-declaration of a gross mass is notified to the MCA, the “approved” shipper will be asked to explain the non-compliance and depending on the severity or number of non-compliances the “approval” will be revoked and shipper will have to use Method 1.



Annex 3 Methods for obtaining the verified gross mass of a packed container

A3.1 Method 1 Weighing the packed container

A3.1.1 The UK common standard for weighbridges is BSEN 45501, [shortly to be republished]. The EC Directive on non-automatic weighing instruments 2009/23/EC is implemented through the Non Automatic Weighing Instruments Regulations 2000 SI3236. [The Directive will be recast next year.] In the UK the Regulations are enforced by the Local Weights and Measures Authority (LWMA).

A3.1.2 In addition, for the purposes of this guidance, it will be the responsibility of the weighing instrument operator (e.g. weighbridges, load cell sensing technologies etc.) to ensure that the equipment has a documented procedure for maintenance, calibration and testing of the equipment and the associated records should be kept.

A3.2 Method 2 Certification and Approval Procedures for the calculation of the verified gross mass of a packed container

A3.2.1 Introduction

The following process methods shall be deemed acceptable to fulfil the requirements to establish a verified weight:-

1. the use of Enterprise Resource Planning (ERP) , Systems Applications Products (SAP) or similar management processes which are traceable and audit based
2. physically weighing goods on calibrated and certified equipment, in accordance with manufacturers recommended practices or appropriate EU/ISO standards
3. equivalent/homogenous goods with a known weight per pallet (or other transport unit) in conjunction with the use of ERP and auditability.

A3.2.2 Certification and Approval of the calculated method by the MCA

1. The certification of the calculation method described below will need to be undertaken subject to MCA approval of the process as detailed in Annex 2
2. Additional requirements may be specified by the MCA following consultation with the shipper but the MCA will accept the use of existing audit based schemes as the basis for authorising a shipper to become an approved shipper for use of Method 2.

A3.2.3 Calculation of the gross mass of the packed container

Step 1 – weight of the cargo

The weight of the cargo items to be shipped is to be obtained by adding the weight of the individual items together. In the case of bulk products the weight may be obtained from the production process, by metering through calibrated filling devices or by weighing the product.

Step 2 – weight of packaging

The weight of the packaging is either obtained from the manufacturer of the packaging material or based on shippers' / forwarders' data, as verified and captured in the company's ERP or similar system.



Step 3 – weight of pallets, securing materials and dunnage

The weight of pallets, packing materials, securing devices such as shoring poles and dunnage is either obtained from the manufacturer, based on shippers' / forwarders' data or preferably weighed and captured in the ERP (or similar) system. In all cases it is the shipper's responsibility to consider the validity of such data.

Step 4 – tare weight of the empty container

The shipper should use the tare weight indicated on the container

Step 5 – gross weight of the loaded container

The weights obtained in steps 1 to 4 above should then be added to obtain the gross mass of the packed container.

A3.2.4 Accuracy of the calculation of the verified gross mass of a packed container

1. In the calculation method, the different weights that are added together to establish the sum of the gross weight are subject to variation. For example, the weight of wooden pallets, dunnage and blocking bars depends on the humidity.
2. All weighing devices used to determine the weight of the individual components and some minor differences in the tare of the empty container as well as cargo items contribute to these deviations.
3. It is recognised that there may be potential deviations in this methodology for determining the verified gross mass of a packed container and these should be documented and addressed as part of the shipper's management procedures.
4. Notwithstanding these potential deviations in the gross mass of a packed container, nothing shall derogate from the shipper's responsibility to establish accurately the verified gross mass of the packed container, in accordance with SOLAS VI Reg. 2.



Annex 4 Bibliography and supplementary information (under development)

A4.1 Weighbridges [‘unofficial list’]

A4.2 ILO/IMO/UNECE CTU Code and associated informative material:
<http://www.unece.org/trans/wp24/guidelinespackingctus/intro.html>

A4.3 IMO MSC 1/Circ.1475 <http://www.imo.org/OurWork/Circulars/Pages/IMODOCS.aspx>

A4.4 MCA website & database of approved Method 2 shippers [web links]

A4.5 AEO [web link]

A4.6 SOLAS [web link]

A4.7 ISO 9001/28000 [web link]

A4.8 CSC [web link]

A4.9 Reporting in accordance with paragraph 12 of the Guidance document should be made to the Environmental Policy Branch of the MCA (dangerous.goods@mca.gov.uk). Such incidents may be pursued under the Merchant Shipping (Carriage) Regulations 1999 as amended.

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