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## **Fruit Export Industry Guidelines on Implementation of IMO, SOLAS Chapter VI, Part A, Regulation 2: Shippers Mandatory Verification of the Gross Mass of a Packed Container (VGM)**

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### **VGM Guideline Part 2 of 3: 27<sup>th</sup> May 2016**

### **Revision 1: 14<sup>th</sup> May 2016 – inclusion of section 4 and update to section 3, 8 & 10**

**To fruit packhouse managers, fruit shippers (producers, exporters, importers and receivers), shipping / forwarding agents, logistics and IT service providers, shipping lines and interested stakeholders,**

In considering the various aspects concerning the requirement by the International Maritime Organization (IMO), Safety of Life at Sea (SOLAS) convention to verify the gross masses of packed containers for export, a three part set of guidelines will be published to assist the fruit industry in determining best practice to comply with the requirements; where compliance is applicable. There are three main areas which have been identified in considering this requirement –

1. Implementation Guidelines to obtain the Verified Gross Mass (VGM) of Containers in terms of the IMO Requirements (Released 21<sup>st</sup> April 2016),
2. Implementation Guidelines to Notify Shipping Lines the Declaration of Verified Gross Mass (VGM) of Containers (Released 27<sup>th</sup> May 2016), and
3. Implementation Guidelines to Verify the Container Gross Mass through the South African Maritime Safety Authority (SAMSA) Appointed Third Party Certification and Approval Process under Method 2.

These guidelines are considered to be the most effective and practical measures that can be recommended, the guidelines should be considered for reference purposes only. Individual shippers (exporters, imports/receivers or producers) / shipping (forwarding) agents may choose to consider these guidelines or adopt alternative measures (after consultation with the applicable authority) to adhere to the IMO requirements.

### **VGM Guideline Part 2: Implementation Guidelines to Notify Shipping Lines the Declaration of the Verified Gross Mass of Containers.**

#### **1. Container Lines Stance on Shippers / Shipping agents Declaration of the VGM**

In terms of section 6 of the SOLAS regulations, it requires that the shipper agent verify the gross mass of the packed container using Method No.1 or Method No.2 and to communicate the verified gross mass in a 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 utilizing calibrated and certified equipment on the route between the shippers origin and the port terminal). In either case, the document should clearly highlight that the gross mass provided is the "verified gross mass" as defined in paragraph 2.1 of the regulations.

However in the context of South Africa, the container terminals are operated by a state organ namely Transnet Port Terminals (TPT). TPT utilize the NAVIS SPARCS N4 Terminal Operation System (TOS), as part of the system upgrades TPT initiated that all containers for export be pre-advised to the terminals prior to the containers



being delivered to the terminals for export. Principally the information contained in the NAVIS pre-advice submission pertained to the line operator, container number, seal number and the gross weight of the packed container. The NAVIS pre-advice function superseded the requirement that a Container Terminal Order (CTO) be drafted and submitted to the terminals prior to the delivery of containers to the terminals. Where containers are to be delivered to terminals that are not operated by NAVIS, a Container Terminal Order (CTO) will be required to be submitted including the container VGM. Through comprehensive engagement with the container lines operating in South Africa, it has been established that the NAVIS pre-advice submission will be used as an acceptable form of declaration of the VGM of containers. In most cases the lines will not require a hardcopy of a VGM declaration and will merely deem that the VGM of the container is accurate as contained in the pre-advice submission. TPT will be updating the NAVIS pre-advice fields to include the requirement for the VGM of the container. As it stands the VGM submitted under Method 1 will not require a shippers SAMSA certification number, the VGM submitted under Method 2 will require that the shippers SAMSA certification number and shippers appointed signatory be submitted as part of the VGM pre-advice. It is foreseeable that the NAVIS system will be updated to include the VGM details within the first or second week of June 2016. More details on the precise layout and functionality of the NAVIS pre-advice portal will be distributed once TPT have made the amendment public.

It is foreseeable that two options will be adopted by the container lines in the method of pre-advising containers for export; which will include the VGM of the container as per the SOLAS regulations –

1. NAVIS pre-advice: most lines have indicated that shippers (or nominated service providers) under proxy will be requested to manually pre-advice directly to the NAVIS web portal or establish EDI links to electronically transmit the pre-advice information to NAVIS. In this case the lines will obtain the VGM via NAVIS, or
2. Lines pre-advice: certain lines will request shippers (or nominated service providers) to manually pre-advice on the lines dedicated pre-advice web portal or establish EDI links to electronically transmit the pre-advice information to the lines. In this case the lines will receive the VGM submission and then transmit the pre-advice information on to NAVIS. It will have to be ascertained that the pre-advice will be transmitted to NAVIS by lines within a suitable timeframe, this to allow trucks to enter TPT without being delayed as a result of a delay in the pre-advice being transmitted.

## 2. Current NAVIS Pre-advice Process and Anomalies

The current process has various forms of communicating the pre-advice into NAVIS. In the case of merchant haulage, this is achieved by 1) lines appointed container depots electronically transmit the pre-advice to the lines on despatch of the container, the lines then transmit the pre-advice to NAVIS, or 2) the shipper under proxy or their appointed service provider manually pre-advice directly into NAVIS. In the case of carrier haulage the lines undertake to pre-advice the containers to NAVIS. The timeline of the current pre-advice in many cases is done prior to the container being packed with the gross mass of the container predominantly being obtained from the booking weight. This may or may not have been entirely correct and accurate as the physical weight of the cargo may or may not have changed in accordance to the physical contents being packed into the container versus the mass as indicated on the booking. It has been further established that in many cases the gross mass of the container is being erroneously pre-advised where, 1) the tare mass of the container was omitted and not added to the mass of the cargo to pre-advice to NAVIS the gross mass of the container as is required, 2) the mass as reflected on the booking (Q67) was used to pre-advice the container mass where the cargo mass was in fact different to that of the booking, and 3) the incorrect container tare mass (mostly an average mass was used to reflect the tare mass of a reefer container) was added to the cargo mass to determine the gross container mass. All in all the lines indicated that mass discrepancies exist (in some cases quite severe) between the booked mass, the shipping instruction mass and the pre-advice mass declared.

## 3. Updated Pre-advice Process Including the Requirement of the Verified Gross Mass (VGM) of Containers

With the SOLAS regulations requiring the VGM of the container, this will alter the landscape of the pre-advice modus operandi drastically. Shippers will be required to submit the pre-advice for ALL containers being delivered to TPT NAVIS terminals. Therefore shippers will be required to request lines to issue access to NAVIS to submit

the pre-advice. Access to NAVIS will also be required in the case where a third party will be appointed to submit the pre-advice on shippers behalf. There are some important aspects that shippers need to consider here in lieu of the amended NAVIS pre-advice requirements:

1. The actual Verified Gross Mass will be required to be submitted in the pre-advice. Shippers will have to ensure that processes are in place to obtain the VGM of containers as per the requirements and that mass is used in the submission of the pre-advice and no other mass.
2. The VGM will in all accounts only be established upon final completion of packing the container. The VGM of the container requires that the mass be ascertained including the actual verified mass of the container contents as well as the tare mass of the container, this in all likelihood can only be determined upon final completion of packing the container. Therefore the pre-advice will more than likely only be submitted once the container has completed packing. This pertains to establishing the VGM under method 1 and method 2. In the case of obtaining the mass of pallets as per method 2 where the weighing of pallets is done prior to packing the container, the gross cargo mass can be determined prior to packing the container. If the container unit tare mass can be ascertained ahead of packing the container, the VGM of the container can be ascertained prior to packing the container.
3. The pre-advice will be required to be submitted timeously to NAVIS considering packed containers could arrive at the terminals within 15 minutes of final packing (E.g. containers of fruit being packed in Bayhead, Durban delivered to DCT Pier 2 alongside the port). It is foreseen that the pre-advice submission will be required to be done as soon as the container has completed packing. When the gross mass of the container contents has been determined (as per method 1 and method 2), the tare mass of the container can be added to determine the VGM of the packed container to be submitted on the pre-advice.
4. Shippers SAMS certification number and designated signatory under method 2 must be declared where applicable. It has been indicated by TPT; as per the preliminary pre-advice update, that where method 2 has been used to determine the VGM of a packed container, the shippers SAMS certification number and designated signatory of the shipper must be included in the pre-advice. Shippers will therefore be required to ensure that designated service providers submit the correct details pertaining to this aspect of the pre-advice submission (At this time there appears to be no formal requirement within the pre-advice submission in terms of obtaining the VGM under method 1 over and above the VGM of the container. The liability and accountability in terms of the accuracy of the VGM declaration rests with the shipper. It is therefore imperative that shippers appoint competent service providers as proxy to submit the pre-advice on their behalf. It is advisable that shippers develop a process whereby the pre-advice submissions made on shippers behalf can be checked for accuracy.

After much deliberation will the lines and other stakeholders in considering the above points, it appears that the most beneficial point at which to submit the pre-advice is at the place at which the container was packed. Therefore the most beneficial service provider to submit the pre-advice on behalf of shippers (where it deemed to be so) is the appointment of the pack station (pack station is the place at with the container is packed with fruit). This should be considered for both merchant haulage and carrier haulage. Consider the following –

1. In most cases the pack station should have the relevant detail to determine the VGM of the container under method 1 or method 2.
2. The pack station can submit the pre-advice as soon as the container has completed packing.
3. The pack station can identify the VGM was determined using either method 1 or method 2.
4. The pack station is the most credible source of ensuring the VGM declaration has been submitted accurately on behalf of shippers.
5. The pack station can ascertain the shippers SAMS certification number and designated signatory to the pre-advice submission under method 2.

Further recommendations regarding the NAVIS VGM pre-advice –

1. If it be that the pack station is not the preferred or designated proxy to do the pre-advice submission, it must be certain that whomever is designated has the ability to identify the correct VGM detail to pre-advice on behalf of shippers (e.g. transporters).
2. It would seem to be prudent that a form of service level agreement be signed with the third party performing the pre-advice submission on shippers behalf. Once the VGM pre-advice has been submitted

to NAVIS, the shipper may not alter or amend the VGM. The shipper will have to consult with the applicable line to make an amendment should it be required. Again it is advisable that shippers develop methods to verify the accuracy of the VGM pre-advice submission made on their behalf.

3. The shippers VGM determination to be used; either method 1 or method 2 including the shippers certification number and shippers designated signatory; in the case where method 2 is used to determine the VGM of the container as well as the party submitting the pre-advice should be contained in the Q67 booking form.

#### 4. The Responsible Party to Determine the VGM of Containers and Submit the VGM Declaration

In terms of IMO Guidelines regarding the verified gross mass of a container carrying cargo (MSC.1/Circ.1475) section 4.1 'The responsibility for obtaining and documenting the verified gross mass of a packed container lies with the shipper'. The definition of 'Shipper' as per section 2.1.12 of the guideline 'Shippers 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 whose name or on whose behalf) a contract of carriage has been concluded with a shipping company.

In terms of the South African Maritime Safety Authority Merchant Shipping Act (Act No. 57 of 1951), Merchant Shipping (Carriage of Cargoes) Regulations, 2004 (No. R. 859 dated 23<sup>rd</sup> July 2004), the definition of 'Shipper' is described in section 3 as "Shipper means any person who, whether as principal or as agent for another, consigns goods for carriage by sea".

The important aspect to consider is which party or person/s is responsible for determining the VGM and responsible for submitting the VGM declaration. Therefore once this has been established it can be ascertained which party or person/s is responsible for ensuring the VGM is obtained and whether determined by using method 1 or method 2 in terms of the applicable weighing criteria. There are a few possible scenarios here which determines the responsible party or person/s obligated to determine the VGM and submit the VGM declaration (E.g. NAVIS pre-advice) to the lines –

1. Where an **export agent domiciled in South Africa** has procured fruit from a producer to be shipped. Is the party 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 whose name or on whose behalf) a contract of carriage has been concluded with a shipping company. In this case it is quite simply the export agent who is responsible to determine the VGM and submit the declaration to the line/s. (Refer section 11 of SAMSA MN 25 of 2016)
2. Where an **importing agent/receiver domiciled outside of South Africa** has procured fruit from a producer/exporter to be shipped (where the producer is domiciled in South Africa or outside South Africa). Is the party 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 whose name or on whose behalf) a contract of carriage has been concluded with a shipping company. In this case the importing agent/receiver should appoint the delegation of authority to a local exporter/shipping agent by way of formal written appointment who then is responsible to determine the VGM and submit the declaration to the line/s and their behalf. (Refer section 12, 13 and 14 of SAMSA MN 25 of 2016)
3. Where a **producer domiciled in South Africa** is shipping fruit (e.g. on consignment) directly. Is the party 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 whose name or on whose behalf) a contract of carriage has been concluded with a shipping company. In this case the producer should appoint the delegation of authority to a local exporter/shipping agent by way of formal written appointment who then is responsible to determine the VGM and submit the declaration to the line/s and their behalf. (Refer section 11 of SAMSA MN 25 of 2016)
4. Where a **producer domiciled outside of South Africa** (E.g. Namibia, Swaziland and Zimbabwe) is shipping fruit (e.g. on consignment) directly. Is the party 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 whose name or on whose behalf) a contract of carriage has been concluded with a shipping company. In this case the producer should appoint the delegation of authority to a local exporter/shipping agent by way of

formal written appointment who then is responsible to determine the VGM and submit the declaration to the line/s and their behalf. (Refer section 12, 13 and 14 of SAMSA MN 25 of 2016)

Every container of fruit that is to be shipped from South African ports (where either packed in South Africa or packed outside of South Africa) will be required to have the VGM of the container determined and the VGM declared (E.g. NAVIS pre-advice) to the lines. Either the shipper/exporter (domiciled in South Africa) will be directly involved in determining the VGM and submit the VGM declaration (E.g. NAVIS pre-advice) to the lines, or a local exporter/shipping agent will perform the function on behalf of the shipper. In the latter case the delegation of authority should be given to a local exporter/shipping agent by way of formal written appointment who then is responsible to determine the VGM and submit the VGM declaration (E.g. NAVIS pre-advice) to the lines on behalf of the shipper. For the purpose of clarification, reference to the term “Shipper” will mean ‘any organization, company or person/s that is responsible for determining the VGM of a container/s and is thus responsible for the declaration and submission of the VGM as outlined above’.

#### 5. VGM Mass Record Keeping and Traceability

It is highly recommended that a traceability audit of the VGM of containers be catered for in the process. If for any reason an audit is required or requested by an authority or shipping line to establish the authenticity of the VGM declared, record keeping would ensure this is obtainable. It is therefore deemed beneficial that all systems be updated to include the VGM detail in the final container packing list (commonly referred to as the mates receipt). The VGM detail can be carried through on the final packing list to the shippers IT operating system. The packing list should record the cargo specification as well as record the VGM and the calculation used to determine the VGM –

1. Method 1: record and reflect on the packing list the mass of the weights recorded for truck trailers weighed on weighbridges before and after packing to determine the cargo weight. E.g.

	Mass of packed container on truck trailer	= 52, 260 kg's
-	Mass of partially packed / empty container on truck trailer	= 24, 678 kg's
=	Sum total of the mass of container contents	= 27, 582 kg's
+	Tare mass of empty container as stated on CSC plate	= 4, 650 kg's
=	<u>Verified Gross Mass of the Packed Container</u>	<u>= 32, 232 kg's</u>
	Shippers/shipping agents Certification Number	_____
	Shippers/shipping agents Designated Signatory	_____

2. Method 2: record and reflect on the packing list the sum total of the masses of individually weighed pallets to determine the cargo weight. E.g.

	Sum total of the mass of container contents	= 27, 582 kg's
+	Tare mass of empty container as stated on CSC plate	= 4, 650 kg's
=	<u>Verified Gross Mass of the Packed Container</u>	<u>= 32, 232 kg's</u>
	Shippers/shipping agents Certification Number	_____
	Shippers/shipping agents Designated Signatory	_____

In terms of Section 9 of SAMSA MN 25 of 2016, a 2% enforcement tolerance will be implemented by SAMSA against the declared VGM. Shippers should also consider a form of disclaimer to be incorporated within the shipping instruction and/or the packing list against the VGM declared. Consider the following –

1. The mass of fruit will alter over time due to moisture loss. There may well be a discrepancy with the VGM declared due to changes in the mass of the cargo, and
2. Shippers are required to include the tare mass of containers in the VGM submission. There may well be a discrepancy with the VGM declared due to a variance in the tare mass of the container being contrary to the tare mass as indicated on the container. Shippers have no means to determine the accuracy of the tare mass of the container.



Furthermore in the case where the VGM of a container has been detected to be mis-declared and deemed to be inaccurate over and above the 2% enforcement tolerance, before accepting liability shippers must ensure that it can be determined if the cargo mass and/or the mass of the container has led to the VGM being erroneously mis-declared.

#### 6. Submission of the Pre-advice in the case of Dual Loads

In the case where a container is packed with fruit at multiple packing stations, shippers may consider submitting the pre-advice directly as per the requirement of the respective lines. It may be the most viable option as the shipper can determine the sum total of the mass of the container contents as provided by the respective pack points. To determine the VGM of the packed container consider the following –

1. Method 1 where certified weighbridges are used: irrespective whether the container is empty or partially packed, the pack station/s can weigh the truck trailer loaded with the container on arrival prior to packing any pallets into the container to determine the mass of the container. The truck and trailer loaded with the container can be weighed as a single unit of mass = mass (A). After the container has been partially packed with pallets of fruit, the truck and trailer loaded with the container can be weighed again as a single unit of mass = mass (B). To determine the mass of the pallets of fruit packed into the container = mass (B) – mass (A) = mass of the pallets packed in the container = mass (C). The sum total of the mass of the pallets packed at the pack station should be systematically recorded and added to the packing list.
2. Method 2 where pallets are weighed using certified methods: if the pallet masses have been recorded systematically, the pallet masses should be contained in the container packing list. Each pack station can provide the shipper with the packing list indicating the sum total of the pallet masses packed in the container.
3. To determine the sum total of all the pallets packed within a container the shipper can add the masses as provided by each pack station as should be contained in the packing list. The shipper can then add the tare mass of the container to the sum total of all the masses of the pallets as packed at the various packing stations to determine the VGM of the container. The shipper can then submit the pre-advice including the VGM.
4. In the case of dual loads where containers are packed at multiple pack stations where method 1 and method 2 was used to determine the mass of the pallets packed within a container, it seems best practice that the shipper declares method 2 in the pre-advice submission. The shipper would then add the SAMSA certification number and designated signatory in the pre-advice submission.

#### 7. Commencement Date of the Pre-advice Including the VGM Details

As indicated by TPT, the NAVIS pre-advice including the requirement for the VGM in the pre-advice submission will be implemented on the 27<sup>th</sup> June 2016. This will allow containers being stacked for loading on vessels departing on or after the 1<sup>st</sup> July to have the VGM as required. Furthermore as contained in SAMSA MN25 of 2016, for a period of three consecutive months after the 1<sup>st</sup> July 2016. I.e. up to including 30<sup>th</sup> September 2016, containers loaded prior to 1<sup>st</sup> July 2016 and then transhipped on or after 1<sup>st</sup> July 2016 may be shipped to their final load port of discharge without the verified gross mass specified in SOLAS Regulations VI/2.4 to VI/2.6. Bear in mind that containers that will not be transhipped will be required to have the VGM submitted with the NAVIS pre-advice on the 27<sup>th</sup> June 2016. Containers shipped up to the 30<sup>th</sup> June will not require the VGM submission where containers are to be transhipped to final port of discharge, expiring on 30<sup>th</sup> September 2016.

#### 8. Shippers Determination of the VGM and the Applicable Weighing Method

Contained in part 1 of the FSA Implementation Guidelines to obtain the Verified Gross Mass (VGM) of Containers in terms of the IMO requirements is the methods to determine the VGM of containers. It is ultimately up to the Shipper to determine which method/s will be used to determine the VGM of containers. Fruit packhouses and container packing facilities (all places at which fruit is packed into containers) will be required to ascertain from or reach an agreement with individual shippers as to which method/s will be used to determine the VGM of containers. Shipper/s may have different requirements or arrangements to determine the VGM of containers and this must be ascertained by fruit packhouses and container packing facilities in order to prepare for the required

method/s – where necessary. Apart from the information contained in part 1 of the FSA Implementation Guidelines to obtain the Verified Gross Mass (VGM) of Containers in terms of the IMO Requirements, there are additional points to consider –

1. Where a shipper/s are packing fruit into containers at container packing facilities that are equipped with certified weighbridges, could have an agreement that the pack store will use method 1 to determine the VGM. Neither the shipper/s, the pack store nor the pack house will be required to be audited by a SAMSA certification agency. The VGM determination and declaration will simply be a transaction between that pack store and the shipper, the fruit pack house will not necessarily be involved in the VGM process.
2. A shipper/s may have an arrangement with a facility equipped with a certified weigh bridge where the container can be weighed after packing the container; independently of the mode of transport, to determine the VGM as per method 1. The VGM determination and declaration will simply be a transaction between that weighing facility and the shipper/s, the fruit pack house and the pack store will not necessarily be involved in the VGM process.
4. Where a shipper/s have requested that fruit packhouses or container packing facilities weigh individual pallets in terms of method 2 of the requirements, the packhouse and container packing facility must be guided by the shipper/s in terms of the compliance criteria required. A shipper/s will select an appointed certification agent as approved by SAMSA to conduct audits at shipper/s premises as well as at the packhouses and container packing facilities where pallets are to be weighed. See – FSA Implementation Guidelines to Verify the Container Gross Mass through the South African Maritime Safety Authority (SAMSA) Appointed Third Party Certification and Approval Process under Method 2.
3. Shippers of fruit who have been unable to implement the certified weighing measures as per the SOLAS requirements are encouraged to have the container weighed as per method 1 (as per point 1 and 2 above) to determine the VGM of the container prior to delivering in port terminals. There is no requirement by the IMO or SAMSA by when the VGM determination should be implemented by.
4. The above can be done during the transition phase at which time the SOLAS VGM requirements are being implemented. It was foreseen that the requirements under method 2 would require much time to implement and this was not deemed to be achievable by the 1<sup>st</sup> July 2016. The ordering and installation of weighing devices, the calibration and certification of the devices, the system upgrades to record masses as well as the SAMSA third party audit of shippers, pack houses and pack stations will take some time to implement.
5. Containers which are packed at pack houses, cold stores and container packing facilities located inland; which do not have any methods to determine the VGM of containers, should consider point 2 above as an option to determine the VGM of the container.
6. Shipper/s and fruit packhouses are encouraged to evaluate the difference in the cost per carton between weighing containers using method 1 (where weighbridges are concerned) against weighing individual pallets in terms of method 2 (where floor scales have been implemented at fruit packhouses and container packing facilities). It is presumed that one floor scale installed at a fruit packhouse would suffice for weighing  $\leq 500,000$  cartons of fruit per season.
7. It must be emphasized that the VGM declaration is legally required for containers shipped onwards from the 1<sup>st</sup> July 2016 and any containers that have been delivered to ports without a VGM will be in contravention of the regulation. Shippers are encouraged to read section 16 of the SAMSA Marine Notice 25 of 2016 dated 27<sup>th</sup> May 2016.

Potential benefits and drawbacks of determining the VGM using method 1 –

1. Does not require SAMSA certification audits of shipper/s, fruit packhouses and container packing facilities.
2. Weighing of containers can potentially cause operational constraints at some facilities.
3. The VGM will only be determined after packing a container, thus it can only be established if the gross maximum mass of the container has been exceeded after packing the container.

Potential benefits and drawbacks of determining the VGM using method 2 –

1. Deemed to be a far more cost effective means to determine the VGM of containers.

2. The VGM of a container can be determined prior to packing the container and therefore the NAVIS pre-advise can be done prior to packing the container.
3. Pallet masses will permit shipper/s and container packing facilities to determine in the VGM of the container will exceed the gross maximum mass of the container prior to packing the container.
4. Container packing facilities can use pallet masses to alter weight distribution in containers to ensure vehicle axle masses do not contravene road traffic regulations.
5. Shipper/s can determine accurate masses when booking containers and submitting Shipping Instructions.

#### 9. The Conundrum iro Cargo and Container Masses Declared

In discussions with lines, it is understood that there can be a difference in the mass indicated on a booking versus the mass indicated on the shipping instruction versus the mass indicated on the pre-advise. As indicated in previous sections it is likely that the mass declared on the current pre-advise submission may be inaccurate to some degree. It is understood that there is a misunderstanding pertaining to the mass that should be declared on the pre-advise submission. The mass declared on the pre-advise submission should pertain to the gross mass of the packed container. The SOLAS regulation now requires that the pre-advise submission be a verified and accurate gross mass of the container and no other mass. However there still exists the possibility that the mass indicated on a booking versus the mass indicated on the shipping instruction versus the mass indicated on the VGM pre-advise could differ. The difference between the booking mass and the shipping instruction mass could well differ as there may be a difference in the fruit specification actually packed within a container, the masses would therefore change. For example if a container is booked to ship a load of Grapefruit with a gross mass of 21, 000 kg's but a load of Lemons was finally packed with a gross mass of 28,800 kg's, there would be a difference of 7,800 kg's between the booked mass and the gross mass as indicated on the shipping instruction. Since the masses indicated on the booking and the shipping instruction only refers to the nett and gross mass of the product, there will be a difference to the gross mass of the pre-advise submission. The VGM submission will include the gross mass of the entire container, this will include the gross mass of the cargo (including packaging material such as pallet bases) as well as the tare mass of the container will be included in the VGM pre-advise submission. It would be impractical to cross reference the mass as declared on the VGM pre-advise against the nett/gross mass as declared on the shipping instruction to determine a discrepancy exists in the these declared masses. The tare mass of the container could differ significantly from the CSC plated mass or as indicated on the container door. A reefer containers tare mass can alter due to various reasons thus giving a distorted figure in terms of the gross mass of the cargo within the container. For example –

Nett mass of product	= 24, 800 kg's
Gross mass of product	= 27, 200 kg's
+ Mass of pallet bases (variable)	= 400 kg's
+ Tare mass of container (variable)	= 4, 650 kg's
<u>= Gross mass of the container</u>	<u>= 32, 250 kg's</u>

#### 10. Maximum Gross Mass/Weight (MGW) of Reefer Containers

Section 16.2 of the SAMSAM Marine Notice 25 of 2016 states the following: SOLAS regulation VI/5 requires that a container not be packed to more than the maximum gross mass indicated of the Safety Approval Plate under the International Convention for Safety Containers (CSC), as amended. A container with a gross mass exceeding its maximum permitted gross mass may not loaded onto the ship. In researching the maximum permitted gross mass of reefer containers it has been identified that depending on the container type, reefer containers have a maximum gross mass (MGW) ranging from roughly 30,250 kg's to 34,000 kg's. This largely depends on the type of material used in the construction of the container and also determines the tare mass of the reefer container. The payload mass of a reefer container is therefore determine by the difference in the maximum gross mass (MGW) and the tare mass of the container. Researching the lines reefer container specifications, it indicates that there exists a range in the payload mass of reefer container ranging between 26,000kg's to 29,500kg's. It does appear that reefer containers are mostly rated on the upper band of 29,500kg's, however there are a number of containers rated in the lower band of 26,000kg's and are presently in use. It seems prudent that some critical elements be considered here –





1. When booking a shipment of heavy weight fruit such as Lemon and Valencia varieties as well as bulk bins with heavy carton masses leading to heavy pallet masses, that the booking be made with an indication that the cargo weight will require the correct equipment type,
2. The container is not packed with cargo that exceeds the payload mass of that container,
3. The VGM does not exceed the Maximum Gross Mass/Weight (MGW) of the container.
4. Shippers are advised immediately in the case where the VGM of a container exceeds the gross maximum mass of a container, and
5. The container is not delivered to the terminal for loading on-board if the VGM of a container exceeds the maximum gross mass of a container.

It must be strongly emphasized here that reefer containers have a general payload mass ranging from 29,000 to 29,500 kg's. However it is deemed that the general average payload mass of a reefer container is roughly 29,200 kg's and this should be the guiding payload mass for reefer containers. The general payload mass of 29,200 kg's equates to an average permissible pallet mass of 1,460 kg's when 20 pallets are packed into a container. There is a possibility that pallet masses may exceed this average mass in the case where Lemon and Valencia varieties as well as bulk bins with heavy carton masses are packed. For example consider that in the case of citrus packed in A15C carton types palletized as high cube with 80 cartons per pallet an average carton mass of 18 kg's equates to a pallet mass of 1,460 kg's (1,460 kg's – 20 kg's for the pallet base / 80 cartons per pallet = 18 kg's average per carton). As per this example, where the average carton mass exceeds 18 kg's in the case of A15C carton types, the pallet mass would therefore exceed 1,460 kg's. If a container is packed with a combined total mass of 20 pallets that all exceed 1,460 kg's, the payload mass and thus the maximum gross mass of a reefer container may be exceeded. Where the VGM of a container will be determined using method 1, the gross mass of the packed container will only be ascertained once the container has been packed. This would be problematic as the container would then have to return to the pack point to remove a pallet/s from the container to ensure the VGM of the container does not exceed the maximum gross mass of the container. When it comes to obtaining the VGM of the container using method 2 where pallets are weighed to ascertain the cargo mass, the payload of the container can be determined prior to packing the container. Therefore using method 2 would assist shippers (producers / exporters and shipping agents) to determine if the VGM of the container would exceed the gross payload mass of the container as well as determine if the maximum gross mass of the packed container would be exceeded. However when determining the VGM of a container using method 2, the VGM is calculated using the sum total of pallet masses with the tare mass of the container added to the sum total of pallet masses to determine the VGM. The actual gross mass of a container may exceed the gross maximum mass if the tare mass of a container exceeds the mass as indicated on the container door and the sum total of the pallet masses equals the maximum payload mass. In the case of 40ft reefer containers the maximum gross mass of the container is generally 34,000 kg's. It is recommended that the maximum gross mass of a packed container is not exceeded under any circumstances, this could put the shipper at risk of liability in terms of potential safety and legal liability as well as potential costs, losses and/or additional surcharges being incurred.

Citrus packhouses are advised to determine if certain pallet masses would exceed 1,460 kg's based on measuring carton masses and/or pallets masses (either from historical mass data or current mass data). If it is determined that masses exceed 1,460 kg's it is advisable to consult with the relevant exporter and/or shipping agents in this regards. If it be the case, it may be that either, 1) standard height pallets would be required to be packed, or 2) less than 20 pallets are packed into the container, or 3) fruit packhouses limit carton masses to ensure that gross pallet masses do not exceed ~1,460kg's.

#### 11. Shipping Lines Customer Advisory iro VGM Declarations

Most of the container lines operating in South Africa have communicated the VGM requirements in the form of a customer advisory. Also most of the lines have specific customer advisories for South Africa and shippers should request these from all lines which are used for shipments. Some of the lines have developed functional systems and tools to assist shippers with the VGM process. Each of the lines will indicate to shippers the specific functionality that has been developed. Shippers must engage with the lines directly to discuss the position of the VGM pre-advice submission and request access to NAVIS where applicable and under proxy from the lines. Shippers may wish to designate a third party to pre-advice on their behalf and therefore will require permissions from the lines and TPT to gain access to NAVIS or lines pre-advice portals.

## 12. VGM Declaration to Specialized Reefer Carriers iro On-deck Containers

Since Specialized Reefer Vessels calling South Africa to load fruit call at leasehold berths and not at TPT facilities, the VGM pre-advice submission is not applicable. Although the VGM declaration is applicable to these vessels, the VGM declaration to the lines will more than likely be made by submission along with shipping instructions. Shippers can consult further with the applicable lines in this regards.

## 13. EDI of the VGM Pre-advice

The EDI submission of the VGM pre-advice should be considered and encouraged as far as possible and preferable as opposed to a manual entry. The ultimate objective is for the VGM submission to be as seamless, timeous, simple, and accurate as is possible. There are a multitude of EDI possibilities by either transmiiting the VGM submission to NAVIS or to shipping lines. As the VGM pre-advice evolves and shippers (or appointed shipping agents) begin to adapt to the amendements, the EDI possibilities should be further explored. Fruit South Africa are proposing the EDI submission of the VGM pre-advice via the Agrihub server. This is one of many possibilities that shippers may choose to adopt. Refer diagram 1.

## 14. Conclusion.

All stakeholders are encouraged to familiarize themselves with the IMO, SOLAS requirements which will become mandatory and official on the 1<sup>st</sup> July 2016. The practice of declaring the VGM of packed containers for export will over time become common practice as part of the shipping process. The following official documents are available for further reference –

1. IMO, SOLAS Chapter VI, Carriage of Cargoes and Oil Fuels, Part A, Regulation 2 – Cargo Information, Section 4 – 6 (Amendment to include the requirement for the verification of the gross mass of containers)
2. IMO Guidelines Regarding the VGM of a Container Carrying Cargo (MSC.1/Circ.1475 – 09/06/2014),
3. SAMSA Guidelines on the Implementation of SOLAS VI Regulation 2 Amendment: Verification of the Gross Mass of Packed Containers (SAMSA MN11 of 2015, SAMSA MN25 of 2015 and SAMSA MN25 of 2016),
4. South African Legal Metrology Act, 2014 (Act 9 of 2014),
5. South African Merchant Shipping (Carriage of Cargo) Regulations, 2004.

It is further recommended that due to the Enforcement and Penalties for Non-Compliance as outlined in section 18 of SAMSA MN25 of 2016, that human engagement in the recording and transfer of masses and the declaration of the VGM to shipping lines and/or terminals in the form of the pre-advice, should be limited as far as possible to avoid the potential for errors.

### Disclaimer:

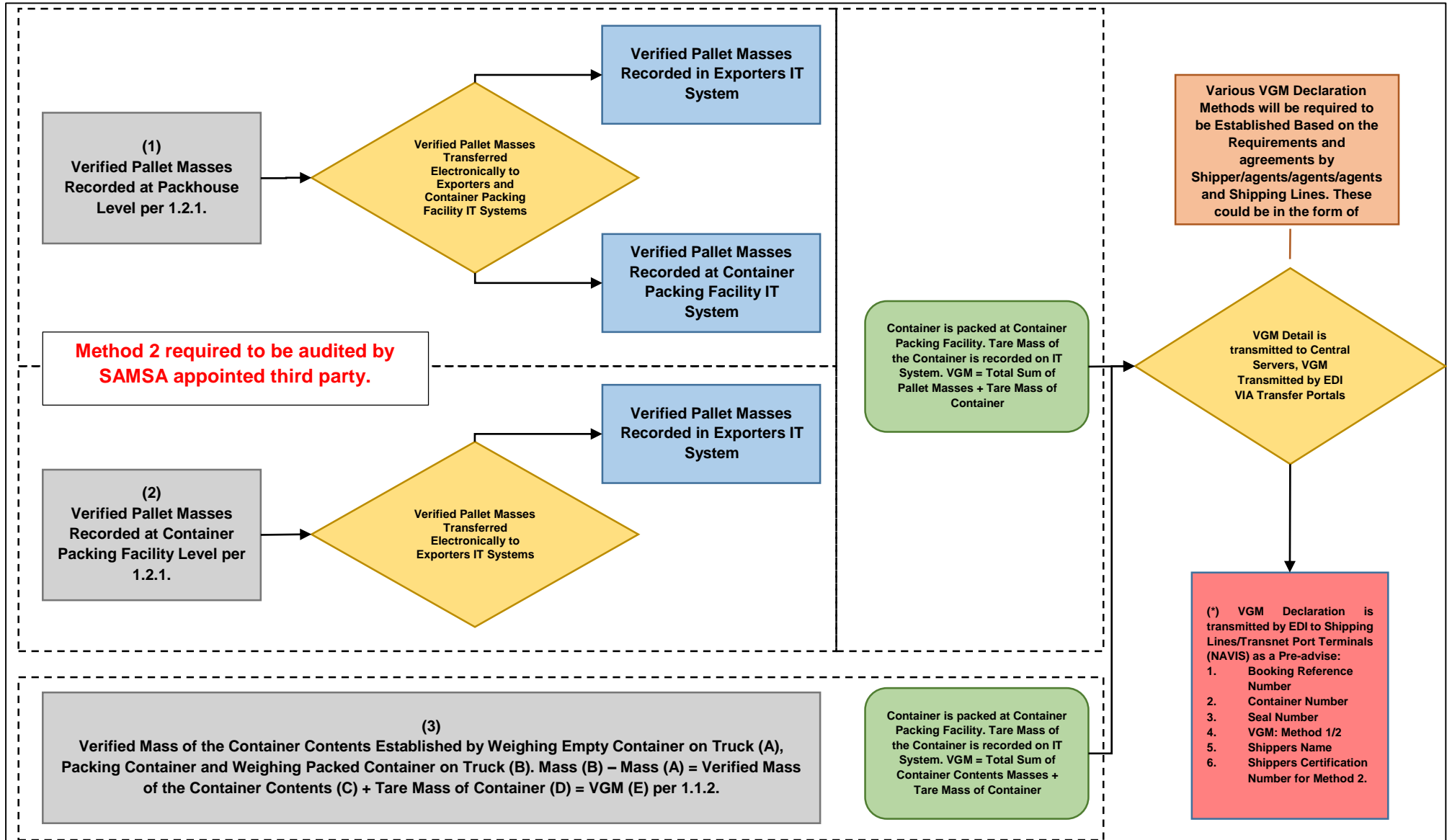
*The information provided in the FSA guidelines are merely proposals that are considered to be the most feasible and practical methods for the fruit export industry to comply with the IMO, SOLAS requirements. Shippers/shipping agents and service providers may consider alternative methods to comply with the requirements which fall out of the scope of the FSA guidelines. All information provided within the FSA guidelines have been considered after consultation with the relevant authorities and stakeholder groups. While the FSA guidelines have been drafted in good faith, FSA and constituents accept no liability for actions taken by using the information contained herein. All official guidelines and applicable state authorities and/or agents must be the overarching reference point in terms of the implementation of the SOLAS requirements.*



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**Diagram 1: Methods for Electronic Transfer of Verified Masses from Points of Weighing to Points of Container Packing with EDI of the VGM Declaration to NAVIS / Shipping Lines via EDI Transfer Portals.**



(\*) The VGM declaration will be included in the NAVIS Pre-advise instruction. The VGM will only be ascertained at the time the container has completed final packing, therefore consideration must be given for the 24/7 nature of fruit packing and the timelines for containers to enter the port gates. The Pre-advise function must be submitted to shipping lines and/or container terminals in a timely and synchronized manner.