1. SUBJECT	2. NUMBER
GUIDE – Supplier Packaging Manual	**ING-16G08**
	3. DEPARTMENT **ENGINEERING**

1. PURPOSE

Define the basic rules to be used by the supplier for packaging, labeling and documentation of the items we receive at the various OTS-Canada sites. The goal is to receive items correctly identified and safe for handling and storage.

2. SCOPE

Applies to purchased parts that will be used on a production line, i.e. products and components that appear on the BOM of a product item.

3. APPROVAL

Signature: _____ Title:	Signature: _____ Title:	Signature: _____ Title:
Signature: _____ Title:	Signature: _____ Title: :	Signature: _____ Title:
Signature: _____ Title:	Signature: _____ Title:	Signature: _____ Title: Director Procurement and ITB
Signature: _____ Title:	Signature: _____ Title:	**Émetteur**: _____ Title: Directrice Ingénierie
Signature: _____ Title:	Signature: _____ Title:	**Autorisation** _____ Title:

General Dynamics
Ordnance and Tactical Systems-Canada

Supplier Packaging Manual

Version 1, November 2022

Table of Contents

1. General Information

The information contained in this supplier manual provides guidelines for packaging specifications, palletization and shipping specifications.

Should there be a situation where a specific packaging problem, supply question or shipping question has not been addressed in the manual, please see specific section for the email addresses or phone numbers to call for information and requirements.

This General Dynamics Ordnance and Tactical Systems Canada (General Dynamics-OTS Canada) Supplier Packaging Manual is also available on the General Dynamics-OTS Canada web site at https://www.gd-otscanada.com/supplier-packaging-guide/

2. Packaging Objective

Supplier packaging must assure product quality and meet prescribed packaging style and applicable laws and regulations.

3. Supplier Responsibilities

Each supplier is responsible for the design of their product packaging and for ongoing adherence to design standards to ensure that their product is transported and received at the General Dynamics-OTS Canada manufacturing plants in quality-approved condition. The supplier is responsible to comply to applicable laws and regulations in effect in Canada as well as the country of origin.

4. General Dynamics-OTS Canada's Environmental Commitment

General Dynamics-OTS Canada is committed to protecting the environment at every stage of the production process including transportation of parts to the manufacturing plants. For this reason, packaging must be designed with respect to the following objectives:

a) Use a minimum of internal expendable packaging
b) Use only expendable materials which can be recycled
c) All plastics (expendable & returnable) must be marked with the material identification symbol to aid recycling (Appendix 1)
d) The use of returnable and/or re-usable packaging where possible and economical. The seller shall be supplied with instructions for the return of such packaging. (Address, shipping mode)
e) Follow the guidelines of ISO 14001

5. Quality Program

General Dynamics-OTS Canada has a Quality Program that is enforced by its quality officers. All suppliers will be subject to a Non-Conformance (NC) for reasons including but not limited to the following:

a) Paperwork errors;
b) Label errors;
c) Packaging issues that do not follow General Dynamics-OTS Canada guidelines or approved packaging, unless the deviation of the packaging is approved in writing prior to shipment by the General Dynamics-OTS Canada representative;
d) Damaged packaging or damaged contents due to insufficient packaging;
e) Packaging that does not meet applicable laws and regulations regarding the Transportation of Dangerous Goods.

6. Order of Precedence

In case of any inconsistency, conflict, or ambiguity among the different documents attached to a Purchase Order, the packaging requirements shall govern in the following order: (a) General Dynamics-OTS Canada Technical data sheet (TDS) or in French “Fiche Technique de Produit (FTP)”, (b) part’s drawing; (c) packaging notes printed on the purchase order, (d) this Supplier Packaging Manual.

7. Wood Packaging Material

Shipments originating outside of Canada and the continental United States (U.S.) which include wood packaging materials including dunnage, pallets or crating made from non-manufactured wood entering Canada from all areas except, all wood packaging materials shall meet requirements of Canadian Food Inspection Agency.

Please refer to directive D-98-08 Entry Requirements for Wood Packaging Material into Canada, specifically Appendices 1 and 2.

Material arriving via the United States but that originated outside of the Continental United States must still meet these requirements.

Hereafter is the website:

WWW.INSPECTION.GC.CA/ENGLISH/PLAVEG/PROTECT/DIR/D-98-08E.SHTML

Suppliers shall also verify the purchase order and associated documents (Drawings, Technical Data Sheets) for guidance. Wood packaging may still be subject to these or similar requirements when required to be capable of re-export, re-use or when required by customers further up the supply chain.

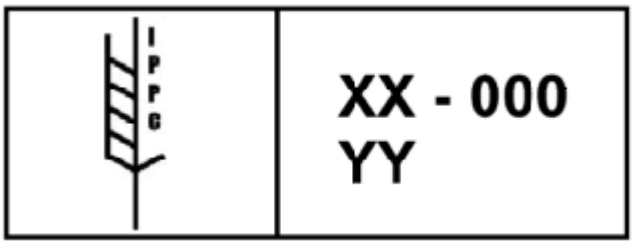
The treatments for wood packaging materials are:

a) HT-heat treatment to a minimum wood core temperature of 56ºC for a minimum of 30 minutes
b) MB-fumigation with methyl bromide
c) CPI-chemical pressure impregnation
d) KD- kiln-drying.

This is for the elimination of pests. The “Mark” is :

a) the ISO two letter country code followed by
b) the unique NPPO (National Plant Protection Org.) registration number assigned to the producer of the wood packaging material
c) the abbreviation for the treatment method
d) the IPPC (International Plant Protection Convention) symbol.

Parts and cartons are to be loaded onto new or used general-purpose pallets in serviceable (good) condition, which are designed and constructed to support a wide range of service part requirements. The pallets are to be compatible with standard forklift equipment. The loads are to be optimized to the size of the pallet leaving very little wasted space on the pallet and it is never acceptable to overhang the pallet.



XX = The ISO two letter country code

000 = The unique NPPO (National Plant Protection Org.) registration number assigned to the producer of the wood packaging material

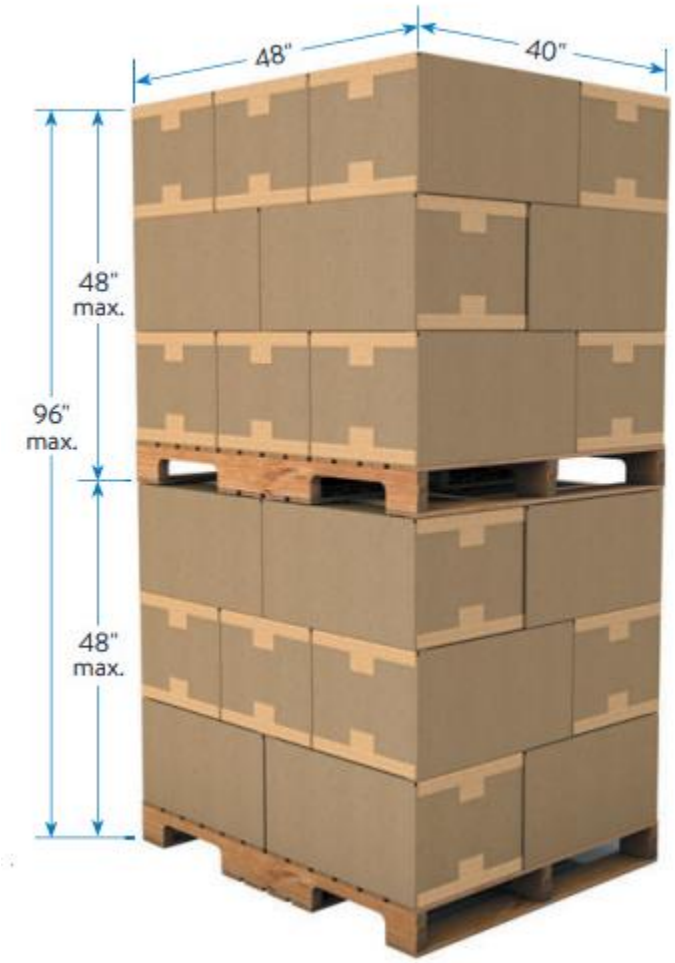
YY = The abbreviation for the treatment method: HT or MB

IPPC = International Plant Protection Convention symbol.

8. Standard Pallet Sizes

Pallets must be of the following size unless part configuration (size) prevents their usage or other instructions and specifications are specified in writing by General Dynamics-OTS Canada.

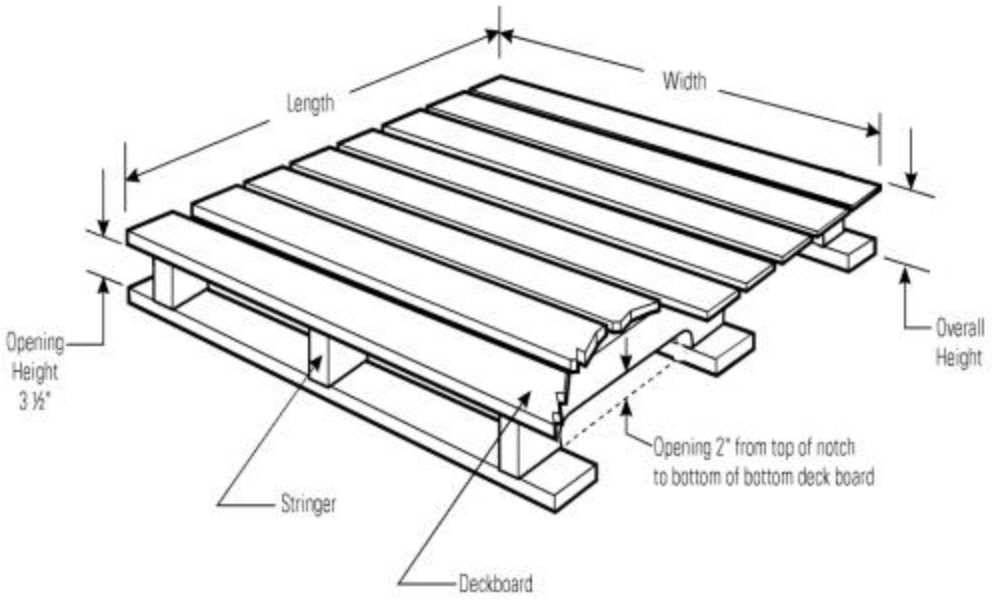
Full pallet 48" (+/- .25") x 40" (+/- .25")



Specialty pallets are acceptable with specific approval. Contact your General Dynamics-OTS Canada buyer with questions or requests.

9. General Construction Pallet Specifications

a) Four way entry stringer design.
b) Double face non-reversible.
c) Flush stringer with both deckboards.
d) Stringer size cannot be less than 1-1/8" x 3-1/2" and 48" length.
e) Pallet height cannot exceed 5" and cannot be less than 4".



10. Specific Construction Specifications

Deckboard Specification

a) Top deckboards may be random width, but no less than 3-5/8". Spacing between boards no more than 4". Deckboards shall not be less than 7/16" in thickness.

b) Bottom deckboards shall be flush with the end of the stringer. Extreme and centerboards will not be less than 3-5/8" in width.

Stringer Specification

a) Stringer notch dimensions and placement notch opening shall be 9" wide, and outside notches shall not be closer than 6" from the end of the stringer.

11. Permissible Pallet Defects and Characteristics:

Knots:

a) The diameter of sound knots shall be no greater than one-third the width of the piece in which they occur. There shall be no more than two such maximum diameter knots in any one piece. Loose or hollow knots shall not exceed one-half of the sound knots. No knots over 1/2" shall be allowed in the stringer immediately over notched areas.

Splits, Shakes and Checks:

a) Length of crack or grain separation must not be longer than two-thirds the width. The width of the piece in the end of the deckboards can be no longer than twice the width of the stringer and inside boards. Splits running through full thickness of the piece (not to be confused with nail splits) are permitted in any number, except when appearing in end boards which must be straddled by nails. Shakes are permitted in any piece if contained by nailing season checks and splits that do not affect structural strength of a pallet are permissible defects.

Warps:

a) No individual piece of any one pallet shall have deviation due to warp, which is greater than the following percent of its measured dimensions:

Bow - 2% Crook - 2% Cup - 3%

Other defects:

a) Infestation of post beetles, termites and other wood destroying insects are not permitted in pallet parts.

b) No combination of defects, which will materially weaken any piece or pallet, should be permitted from pallet supplier.

12. Palletizing

a) Pallet load sizes must comply with General Dynamics-OTS Canada standard size and design unless otherwise specified. A deviation from the normal sized pallets must have approval from your General Dynamics-OTS Canada buyer before using.

b) Pallet load heights **must not** exceed 48” including pallet base.

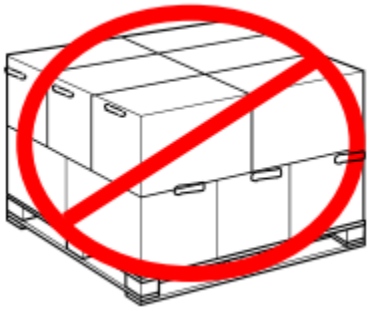
c) The application of fiberboard or heavy corrugated edge protectors is required to prevent banding, strapping or wrapping damage.

d) Pallet loads must be interlocked when possible. The palletized load will not interlock, use corrugated layer separation, cap the load with corrugated material and secure.

e) Pallets must be placed in the carrier’s equipment so that the load does not shift in transit. Stacking of product should enable the load to be double stacked within the trailer during transit. It is the supplier’s responsibility to use adequate load separators and load caps to provide transit protection. Heavy items should always be marked and identified so that they ride as a bottom load and are not top tiered.

f) When stacking pallet loads, labeling information must face the outside perimeter of the pallet so that part number information is visible.

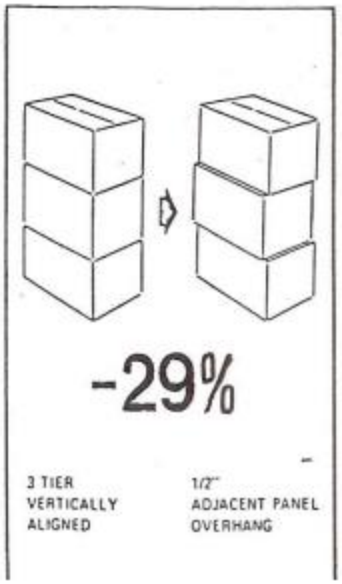
g) Manual handling of the packaging shall be taken into account. For all manually handled packaging there shall be a 25 Kg. (55 lbs) weight limit.
h) Maximum pallet weight is set at 1360 Kg. (3000 lbs)
i) Brick stacking is prohibited due to loss in compression strength.



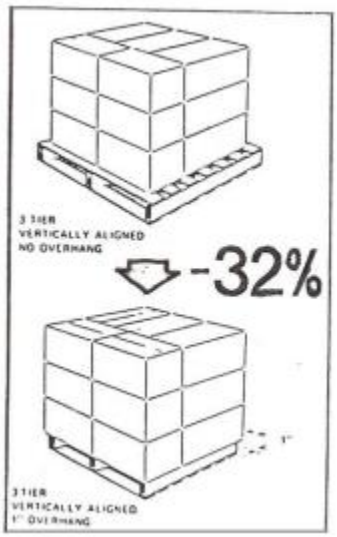
Brick stacking is prohibited.

j) Containers must be aligned and fully utilize the length and width of the pallet due to compression strength loss.
k) To ensure load integrity, stock must not extend (overhang) beyond the edges of the pallet.

No overhang



Non-alignment by 1” (25mm) results in a 29% compression loss



Overhang on pallet by 1” (25mm) – results in a 32% compression loss

Note: It is the supplier’s responsibility to ensure that all pallets provide the protection necessary to deliver the product at the shipment destination in a damage-free condition.

Delivery at General Dynamics-OTS Canada must be accomplished without necessitating re-palletization due to improper size or pallet failure. The cost of material and labor associated with re-palletization will be charged back to the supplier.

13. Box and Container Securement

All boxes and containers shipped on pallets must be adequately secured to the pallets. Nails, screws, metal staples, metal strapping, metal clips or banding buckles, glue or PVC film to secure loads to pallets are prohibited.

The following are acceptable methods for securing a load to a pallet:

a) Plastic (Non-Metallic) Strapping

- A minimum of two vertical bands lengthwise and two vertical bands widthwise must be used.
- Horizontal banding of corrugated boxes is prohibited.
- Polyester strapping is required.
- Strapping color must be standardized.
  - Polyester strapping must be translucent green.
  - If polypropylene strapping is approved, it must be translucent clear.
- Non-metallic strapping must be joined with a friction seal.
- Metal clips or buckles are prohibited.
- Metal banding should be avoided unless plastic banding will not suffice due to the weight of configuration of the load.
- ASTM D3950 and ASTM D3953 serve as standard guides for banding.

b) Stretch film

- Stretch film must be linear low-density polyethylene (LLDPE) and clear in color.
- Stretch film must have enough clarity to enable bar code scanning of labels.
- PVC film is not permitted.
- A minimum of three layers of stretch film, or the equivalent in performance, are required around and encompassing the pallet.
- Stretch film must securely capture the pallet when wrapping the bottom layer.
- ASTM D4649-03 (2009) is the recommended standard for all stretch or shrink films that are used.

14. Specific Bag for Propellant Packing

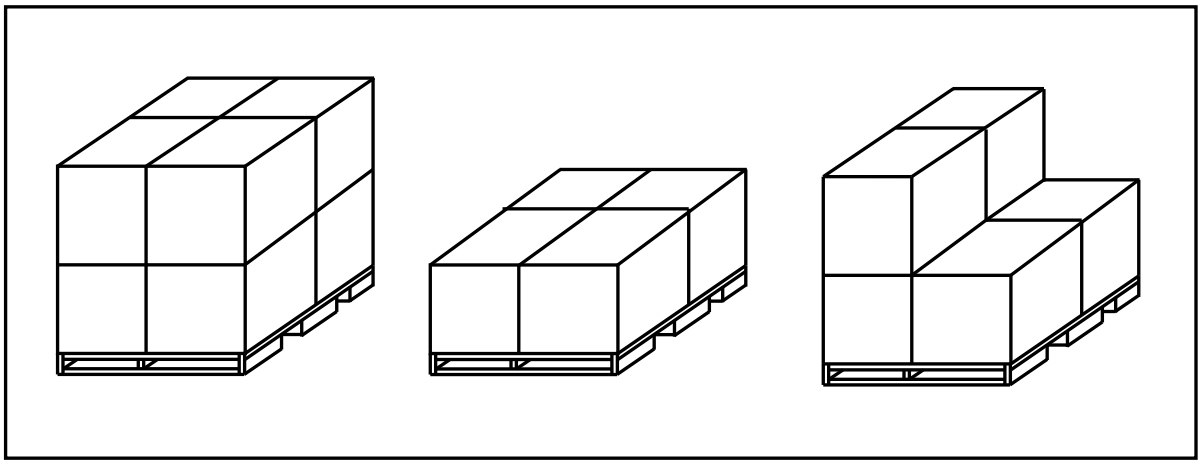
A dissipative type plastic bags with surface resistivity of 10^5 Ω/sq to 10^9 Ω/sq (ASTM D257) are necessary inside a fiber or steel container. It is the supplier's responsibility to know the electrostatic discharge sensitivity of his product. If this requirement is not sufficient for your product, you must communicate with your General Dynamics-OTS Canada buyer immediately.

15. Case, Overpack and Palletization Standards Summary

The packaging information contained on the preceding pages is provided as a general guideline in the packaging of parts. However, from time to time, packaging situations may arise when additional packaging information is required. In those instances, you are requested to contact your General Dynamics-OTS Canada buyer for assistance. This manual will be updated as necessary to ensure that the information is as current as possible.

Illustrations A and B below show the preferred way to pack boxes / cartons on pallets.

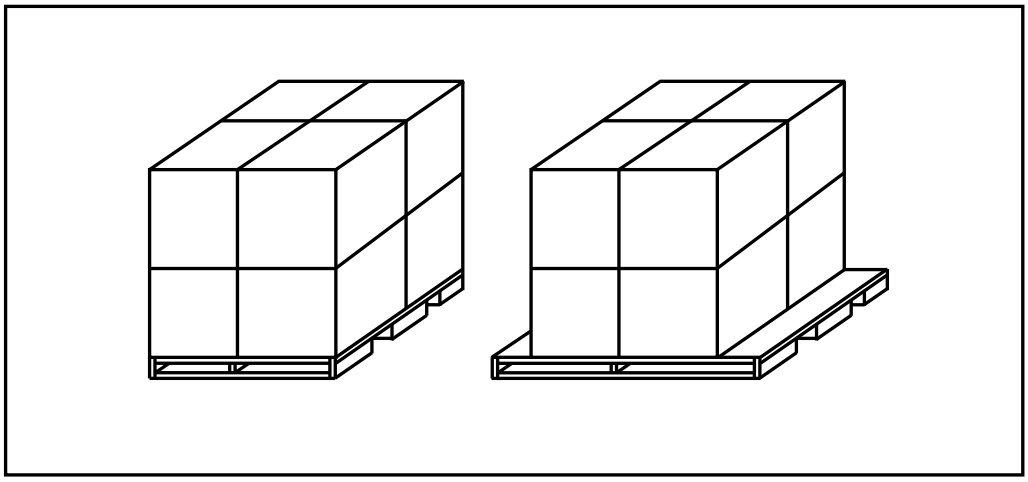
Illustration A



Acceptable Acceptable Not Acceptable

(Top layer not complete)

Illustration B



Acceptable NOT Acceptable

(Containers do not fit pallet)

Unacceptable Design Characteristics

a) Pyramid stacking of cases/boxes/containers disallowing load stacking. This configuration is only acceptable for the last pallet of a multi-pallets shipment.
b) Misalignment of cases/boxes/containers causing crushing.
c) Use of “Do Not Stack” labels, which are prohibited unless specifically approved by General Dynamics-OTS Canada. Product must be designed to double stack. Even if your product weight is significant, it will be double stacked somewhere in the handling.
d) Overweight cases/boxes/containers.
e) Insufficient container strength to protect components.
f) Multiple footprints disallowing standard loading patterns.

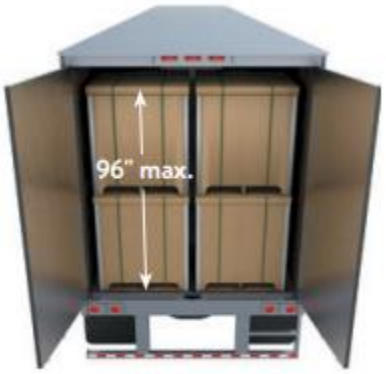
16. Incomplete / Fraction Quantity

In the event the standard quantity per box is not met (typically the last box of an order), the following must be done:

a) A label or a clear bold writing on the box must be present to identify a Fraction box/case quantity from the point of view of a receiving employee
b) The original barcode label with the original quantity should be blackout and the new quantity must be written, preferably a new label should be printed
c) The incomplete box must be on the top layer of the pallet

17. Maximum Stacking

a) Single, Double or Triple stacked pallets should never be taller than 96¨



96" maximum height

18. Labelling

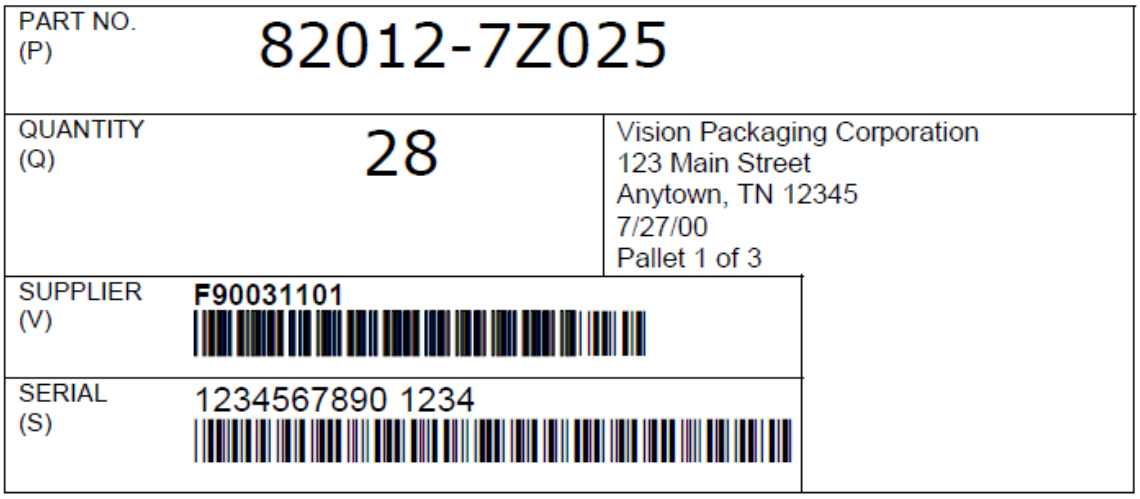
The label used on product and for pallet identification should have at a minimum the following information:

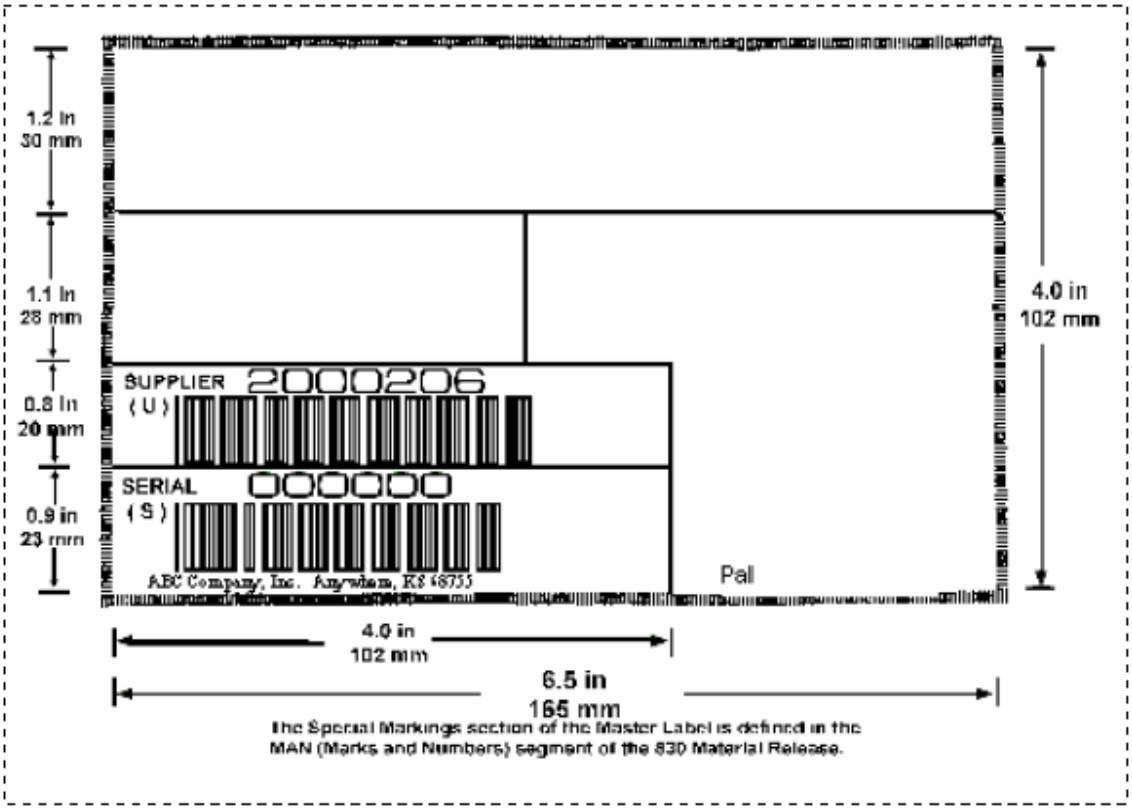
a) Product number
b) Product description
c) Product quantity
d) Supplier Lot number (where applicable)
e) Supplier name
f) Supplier address

Specifically, when dealing with explosive material, the label should have the following minimum information:

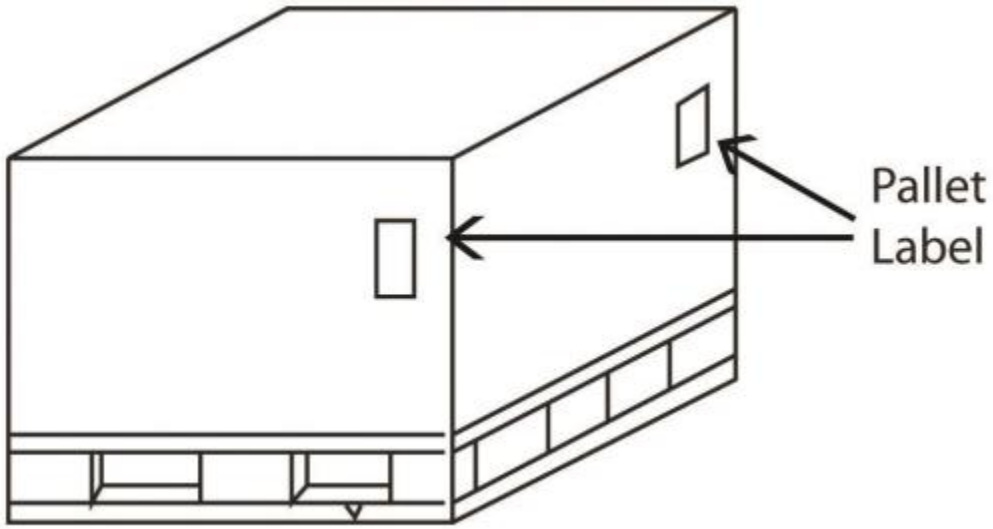
a) Product number
b) Product description
c) Purchase order number
d) Supplier Lot number
e) Explosive classification
f) Name of the supplier
g) Weight per container

The label design should follow the AIAG (Automotive Industry Action Group) Label guideline and specifications





Pallet Labels location: Two per pallet on adjoining sides applied on outside of the stretch wrap.



AIAG Label Specifications

Label Size/Color

a) The label is to be a minimum of 4 inches high by 6 ½ inches long, white in color, adhered as indicated in the marking section.

Bar Code Symbology

a) Bar codes *shall* be Code 39 symbology and shall conform to the Bar Code Symbology Standard AIAG B-3.

Code Configuration

a) The five (5) characters (-, $, /, +, %) of the Code 39 symbology *shall not* be used on the Carton / Pallet Identification Label.

Code Density and Dimensions

a) The bar heights *shall* be 0.5 inch (13mm). For each bar code symbol, the narrow element (X) dimension *shall* be 0.015 inch. The ratio of the average width of the wide elements to the average width of the narrow elements *shall* be 3:1, with an allowable range of 2.8:1 to 3.2: 1. For optimum scanning, the leading and trailing quiet zone *should* be at least 0.25 inch (6.4mm). Intercharacter gap width *should* be the same as the width of the average narrow elements, plus or minus the element width tolerance.

Reflectivity and Contrast

a) Reflectivity and contrast *shall* be measured at B900 nanometers. Symbols shall comply with all optical specifications of AIAG B-3, and *shall* meet at least one of the following contrast requirements:
b) Print Contrast Signal > = 75%
c) Minimum Reflectance Difference > = 37.5%, or
d) ANSI Print Quality Grade shall not fall below that stated in section 8 of the AIAG Shipping/Parts Identification Label Standard (B-3 02.00).

19. Mixed Loads

A mixed load occurs when more than one part number is shipped on a pallet. A mixed load should be considered mainstream when frequency of delivery requires less than full

pallet loads. This also allows better cube utilization of the transportation system. When shipping a mixed load the following requirements must be met:

a) A mixed load label must be affixed to the load on two adjacent corners where the shipping label is normally attached. In addition, a mixed load manifest or packing slip must be attached to the load that indicates the part numbers shipped and how many containers are associated with each part number.
b) The packing slip will designate the entire contents of the load.
c) Similar part numbers will be grouped together on the pallet for ease of identification and accountability.
d) The mixing of containers on a single skid destined for different plants or delivery docks is not allowed.
e) The containers must be positioned on the pallet so the label faces the outside perimeter of the pallet for ease of identification. When possible, all labels should be visible to ease identification and accountability requirements.

Care should be taken to balance the load by distributing the weight as evenly as possible, remembering that similar products must be grouped.

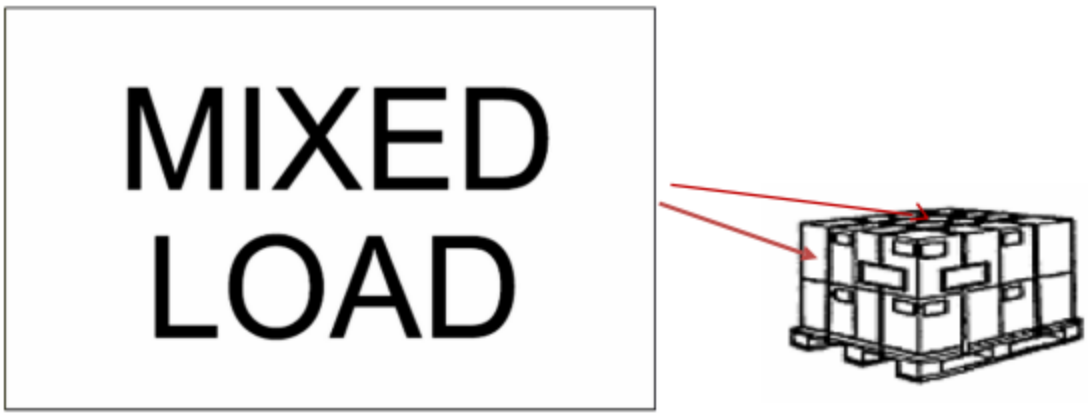
a) The load may require special attention to secure the containers if void and or irregular configuration occurs. Stretch wrap is the preferred method.
b) Level layers are the requirement. This allows better cube utilization of the transportation system.
c) When mixing part numbers on a pallet, the heaviest parts must be placed on the bottom layer.

20. Mixed Load Labels

When improperly handled, Mixed Load labels are probably the greatest source of supplier labeling problems. Misuse of Mixed Load labels can result in problems, and hidden shipping discrepancies.

A Mixed Load label is used when shipping multiple parts on a pallet.

LARGE "MIXED LOAD" LETTER DESIGNATION MUST BE ON THE TOP OF THE LABELS. TWO LABELS ON ADJOINING SIDES ARE REQUIRED. THE LETTERS MUST BE BOLD AND AT LEAST ONE INCH HIGH.



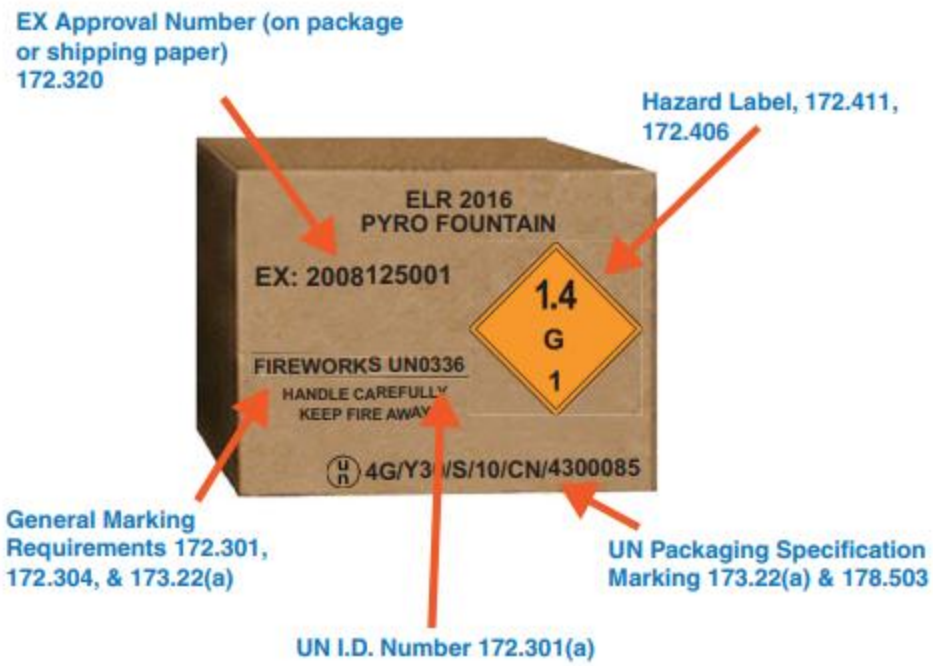
21. Mixed Lots Load

A mixed lots load occurs when more than one lot of a particular part number is shipped on a single pallet. A mixed lots load is not permitted. Only one lot per pallet is allowed. Deviation to this requirement **may be requested** to your designated General Dynamics-OTS Canada buyer.

22. Specific Requirements for Shipment Containing Explosives (USA origin material)

For material with an American origin, the following must appear:

a) EX Approval number (on package or shipping paper);
b) Hazard Label;
c) Proper Shipping name (general marking);
d) UN i.d. number; and
e) UN Packaging Specification Marking.



f) A complete Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS).

g) A completed "Special Instructions for Delivery of Dangerous Goods" form supplied by General Dynamics-OTS Canada/General Dynamics-OTS Valleyfield (APP-16F06).

h) Consignor's certification (confirmation that dangerous goods have been properly classified, packaged and labelled with safety marks according to the TDG Regulations.

i) A complete Bill of lading (BOL) showing the following information:

For suppliers shipping from the United States:

Chemicals CHEMTREC 1-800-424-9300 or 703-527-3887

Explosives or Ammunitions 703-695-4695 and/or 703-695-4696

General Dynamics-OTS Canada Emergency Response Plan Number 2-1388

phone number 1-450-581-3080.

24 hours Handling information please call: CANADA/USA: 1-888-922-3330

General Dynamics-OTS VALLEYFIELD Emergency Response Plan Number 2-1693

phone number 1-888-922-3330.

24 hours Handling information please call: CANADA/USA: 1-888-922-3330

For suppliers shipping from Canada:

The supplier's Emergency Response Plan Number and phone number.

General Dynamics-OTS Canada Emergency Response Plan Number 2-1388

phone number 1-450-581-3080.

24 hours Handling information please call: CANADA/USA: 1-888-922-3330

General Dynamics-OTS VALLEYFIELD Emergency Response Plan Number 2-1693

phone number 1-888-922-3330.

24 hours Handling information please call: CANADA/USA: 1-888-922-3330

23. Specific Requirements for Shipment Containing Explosives (other than US origin material)

For material that has not transited through the USA, the following must appear:

a) Packaging must correspond to that approved by Natural Resources Canada for the approved explosives concerned. (Specific packaging as approved or meets the approved packaging instruction.)
b) When permissible, Limited Quantity markings may be used for specific items. (UN0012, UN0014, UN0055 ONLY. See TDGR SP 125)
c) Hazard Label;
d) Proper Shipping name (general marking);
e) UN i.d. number; and
f) UN Packaging Specification Marking.
g) Consignor's certification (confirmation that dangerous goods have been properly classified, packaged and labelled with safety marks according to the TDG Regulations.

24. Bill of Lading and Shipping Papers Requirements for Shipment Containing Class 1 Material

The following is required:

a) UN I.d. number prescribed for the explosive material
b) Proper shipping name prescribed for explosive material
c) Hazard class or division

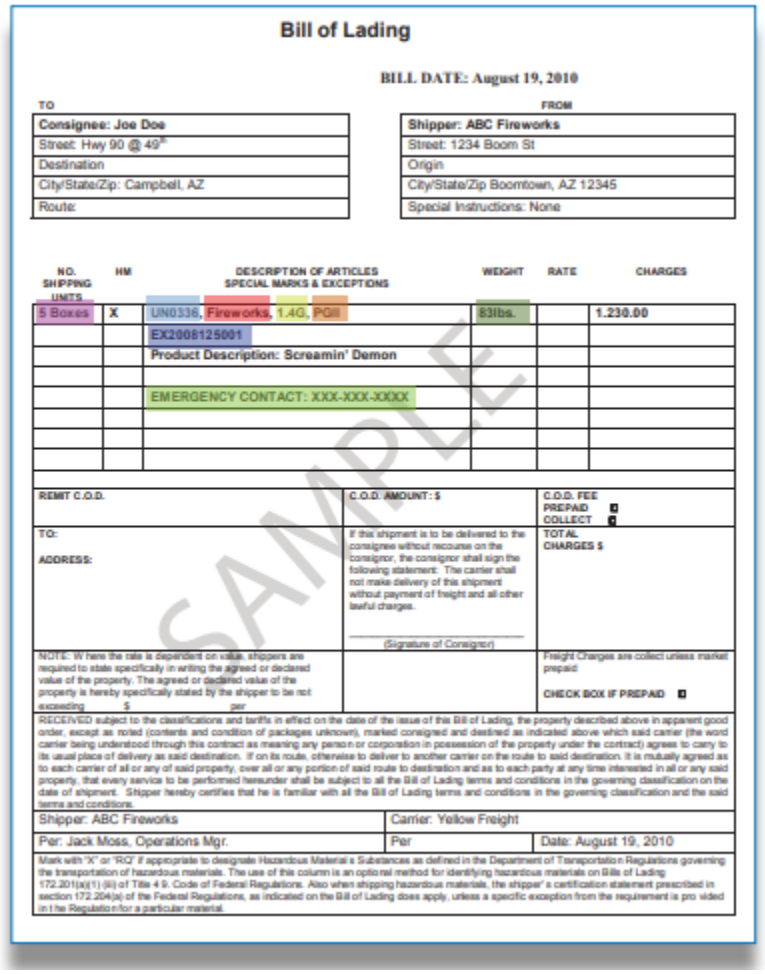
d) Packing group in Roman numerals

e) For Class 1 materials, the quantity must be the Net explosive mass in Kg;

f) EX number must be placed on either packaging or shipping paper (if class 1 material is transiting through USA)

g) The number and type of packages must be included; and

h) Must provide an Emergency Response Assistance Plan number and telephone number



Bill of Lading

BILL DATE: August 19, 2010

TO	FROM
Consignee: Joe Doe	**Shipper: ABC Fireworks**
Street: Hwy 90 @ 49th	Street: 1234 Boom St
Destination	Origin
City/State/Zip: Campbell, AZ	City/State/Zip Boomtown, AZ 12345
Route:	Special Instructions: None

NO. SHIPPING UNITS	HM	DESCRIPTION OF ARTICLES SPECIAL MARKS & EXCEPTIONS	WEIGHT	RATE	CHARGES
5 Boxes	X	UN0336, Fireworks, 1.4G, PGII	83lbs.		1.230.00
		EX2008125001			
		Product Description: Screamin' Demon			
		EMERGENCY CONTACT: XXX-XXX-XXXX			

REMIT C.O.D.	C.O.D. AMOUNT: $	C.O.D. FEE PREPAID ☐ COLLECT ☐
TO: ADDRESS:	If this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. (Signature of Consignor)	TOTAL CHARGES $
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding $ per		Freight Charges are collect unless marked prepaid CHECK BOX IF PREPAID ☐

RECEIVED subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated above which said carrier (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery as said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions.

Shipper: ABC Fireworks	Carrier: Yellow Freight	
Per: Jack Moss, Operations Mgr.	Per	Date: August 19, 2010

Mark with "X" or "RQ" if appropriate to designate Hazardous Material's Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4 9. Code of Federal Regulations. Also when shipping hazardous materials, the shipper' s certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is pro vided in t he Regulation for a particular material.

SAMPLE

Compliance with the terms of an Approval is the responsibility of the person or company authorized to perform the specific function(s). To ensure that Approvals are used safely and in accordance with the required terms and conditions, and companies continue to be allowed to conduct authorized operations, enforcement and safety investigators from various Federal agencies, including DOT, routinely conduct compliance and safety inspections. An EX Approval may be suspended or terminated if the performance of the

holder fails to meet required conditions. Persons found to be in violation of the HMR (Hazardous Materials Regulations) may be subject to civil penalties, criminal fines, and imprisonment.

25. Canadian Shipments: Documentation Requirements

The required documents, including packing slip and quality certificates are to be attached to the lead pallet / carton in a shipment. Acceptable methods include:

Use of a "packing slip" envelope that is firmly attached to the shipment lead carton or applied to an inner layer of stretch wrap that is used to secure the cartons to a pallet.

a) Enclosed within the lead carton with a large clearly identifiable "Shipping Documents Enclosed" markings on the outside of the lead carton.

Note marking on the outside of a carton is acceptable only if the carton is an over-pack.

The envelope must be applied to Pallet 1 or carton 1 in the shipping sequence. The required documents must accompany the shipment, failure to provide the required documents in the manner listed above may result in Non-compliance. It is the suppliers' responsibility to ensure that the documents arrive at the receiving location. Be sure the documents are clearly identified and securely attached.

A copy of the required documents must be emailed to Shipping and Receiving: LEGreceiving@gd-ots.com

A copy of the quality certificates (data pack) must be emailed to the buyer: SuppliersCanada@gd-ots.com

26. International Shipments

Documents Location on Shipment:

The required documents are the Commercial invoice (CI), Canada Customs Invoice (CCI – customs invoice), Shipper's Export Declaration (SED), Packing list or slip (PL), Certificate of origin (CUSMA for USA/Mexico), CETA (Europe), Bill of lading (BOL), Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) and quality certificates like Certificate of Analysis (COA), Certificate of Compliance (COC) are to be attached to the lead pallet / carton in a shipment.

Acceptable methods include:

a) Use of a “packing slip” envelope that is firmly attached to the shipment lead carton or applied to an inner layer of stretch wrap that is used to secure the cartons to a pallet.

b) Enclosed within the lead carton with a large clearly identifiable “Shipping Documents Enclosed” markings on the outside of the lead carton.

Note marking on the outside of a carton is acceptable only if the carton is an over-pack.

The envelope must be applied to Pallet 1 or carton 1 in the shipping sequence. The required documents must accompany the shipment, failure to provide the required documents in the manner listed above may result in Non-compliance. It is the suppliers’ responsibility to assure that the documents arrive at the receiving location. Be sure the documents are clearly identified and securely attached.

A copy of the required documents must be emailed to the group email of the Shipping and Receiving (see sections 32 and 33 for specific email address)

Customs clearance documents

For customs clearance, the required documents to be communicated are: Commercial invoice (CI), Canada Customs Invoice (CCI – customs invoice), Shipper's Export Declaration (SED), Bill of lading (BOL), Manifest or Cargo Control Document (CCD), Packing list or slip (PL), Certificate of origin (CUSMA for USA/Mexico), CETA (Europe) and quality certificates.

These documents are to be emailed to our Customs Broker referencing to the General Dynamics-OTS Canada Purchase Order number:

LIVINGSTON INTERNATIONAL INC.
6700 COTE DE LIESSE
ST-LAURENT, QUEBEC
H4T 1E3
TEL.: (514) 735-2000 / 1-800-361-3097
FAX : (514) 735-9044
Email: GD.OTS@LIVINGSTONINTL.COM

27. Packaging and Labeling

All items must be packaged and labeled in accordance with this Manual. All overpack containers must be of sufficient strength and design to prevent any potential handling damage to the contents. All boxes must be clearly numbered and labeled, as explained in this manual.

28. Packing Slip and Invoice Contents

The supplier's Packing List and Invoice documents MUST CLEARLY STATE the following information:

a) Supplier Name, Address, Phone Number
b) Date shipped
c) Carrier (shipped via)
d) General Dynamics-OTS Canada PO number
e) General Dynamics-OTS Canada Part number
f) Revision level
g) Description of the product with supplier manufacturing lot number (where applicable), by part number by pallet
h) Quantity and unit measure as shown on General Dynamics-OTS Canada purchase order
i) Number of containers shipped
j) Bill of lading number if different from the packing slip number
k) Weight shipped

29. Invoice Submission:

a) Invoices are to be electronically sent to Account Payable at : compteapayer@gd-ots.com

b) Invoices are to be submitted within 24 hours of the shipment of any parts shipment. General Dynamics-OTS Canada will not process invoices received more than 90 days after the receipt of the parts.

c) If General Dynamics-OTS Canada discovers a shipping discrepancy (mismatch between the shipped quantity and the received quantity), General Dynamics-OTS Canada will provide the designated supplier contact a notice informing that a quantity error was discovered at the receiving location and notification that the invoice will be adjusted. The supplier is requested to submit an amended invoice to Account Payable (compteapayer@gd-ots.com).

30. Small Package Shipments

The appropriate shipment method for any General Dynamics-OTS Canada sites with a shipment weight of 150 pounds (70kg) or less and no more than 10 packages is via FedEx Ground.

All small package shipments must first be packed into overpack cartons. Each destination must have a packing slip affixed to the outside of a vendor pack carton, as well as a destination code label. If there is more than one carton for a particular destination, **each carton** must have a number series (i.e. 1/3, 2/3, 3/3) written on it, as well as an *accurate* weight and a destination label.

Please communicate with the Freight Management Representative (listed at section 33) for proper account number.

31. Collect shipments

For collect shipment, you need to notify your buyer in advance for further clarification on which carrier to use.

32. Inbound Appointment Scheduling

All inbound product deliveries made to General Dynamics-OTS Canada should have a scheduled delivery/appointment.

All Suppliers are expected to meet our appointment compliance requirements.

Maintaining high appointment compliance has mutual benefit for both General Dynamics-OTS Canada, Suppliers, and Carriers, including:

- Better labor planning through advanced visibility to incoming freight
- Improved gate-in and receiving efficiencies
- Reduced manual processing, reduced paperwork and re-work
- Improved inbound capacity and availability

Appointment On-Time

a) Loads are required to gate in on-time per the scheduled appointment.
b) A delivery is required to be rescheduled prior to the appointment time if there is a known delay

To set-up a delivery appointment, based on the destination, please contact:

a) Plant Legardeur (LEG)

Group Email: LEGreceiving@gd-ots.com

Address: 5 Montée des Arsenaux, Repentigny, QC J5Z 2P4, Canada

The typical receiving and shipping operating hours are:

- 08:00 - 15:00 Monday to Friday
- EXCLUDING HOLIDAYS

b) Plant Valleyfield (VAL)

Group Email: VALreceiving@gd-ots.com

Address: 55, rue Masson, Valleyfield, (Québec) Canada J6S 4V9

Telephone: 450.371.5520 ext. 2818 or 2266

The typical receiving and shipping operating hours are:

- 08:00 - 15:00 Monday to Friday
- EXCLUDING HOLIDAYS

c) Plant Saint-Augustin de Desmaures (STA)

Group Email: STAreceiving@gd-ots.com

Address: 40, rue d'Anvers, Saint-Augustin-de-Desmaures, (Québec) Canada G3A 1S4

Mobile: (418) 570-8241

The typical receiving and shipping operating hours are:

- 07:30 – 14:30 Monday to Friday
- EXCLUDING HOLIDAYS

33. Contact Information

Below are the contacts or department to contact:

- Account Payable: compteapayer@gd-ots.com
- Purchasing department: supplierscanada@gd-ots.com
- Shipping and Receiving: LEGreceiving@gd-ots.com , STAreceiving@gd-ots.com , VALreceiving@gd-ots.com
- LEG Main Reception and Site Security: 450-581-3080 dial 0
- VAL Main Reception and Site Security: 450-371-5520
- STA Main Reception and Site Security: 418-878-6500
- Freight Management Representative: Herberth Casquero heberth.casquero@gd-ots.com tel: 450-582-6336

34. APPENDIX 1

Recycling and Plastics Identification Symbols

To facilitate the recycling of a product, its identity must be known. There are numerous types of plastics used for automotive packaging which require a simple method of identification. General Dynamics-OTS Canada will require the Resin Identification Codes, the same as on retail packaging. The resin identification code chart is shown below. All vacuum-formed and injection-molded plastic packaging material must be identified by this code

Recycling Number	Abbreviation	Polymer Name
	PETE or PET	Polyethylen Terephthalate
	HDPE	High Density Polyethylene
	PVC or V	Polyvinyl Chloride
	LDPE	Low-Density Polyethlene
	PP	Polypropylene
	PS	Polystyrene
	OTHER	Other plastics including acrylic, polycarbonate, polylactic acid, nylon and fiberglass.

WASTEFUL, EXCESSIVE, OR NON-RECYCLABLE MATERIAL

Packaging is required to serve many needs; part protection, transportation effectiveness, lean manufacturing, and ergonomic and environmental concerns to name a few. Overpackaging and wasteful "just-in-case" packaging is undesirable for both the supplier and the user. Each General Dynamics-OTS Canada supplier is expected to identify and correct such packaging on an ongoing basis.

With reduction or elimination as the first priority, the hierarchy of waste elimination is:

REDUCE →→→ REUSE →→→ RECYCLE

To list every example of wasteful, excessive or non-recyclable packaging would be too extensive. We have identified a few examples that have been significant problems at the plants.

a) Cartons partially filled.
b) Oversized foam, plastic or corrugated dunnage.
c) Micro cellular foam wrap and bubble wrap.
d) Plastic protective covers, caps, plugs, paint masks or spacers required in the manufacturing process, but not required as a protective shipping device.
e) Corrugated carton test strength that far exceeds requirements.

Non-recyclable packaging is that which has no available or economical system in place to process an item. Wax-coated corrugated is a prime example of this type of packaging. Waxed- or plastic-coated paper is prohibited, unless otherwise directed by General Dynamics-OTS Canada.

Plastic plugs, caps, and protectors are extremely difficult to recycle due to oil and paint contamination, colors, uncertainty of resin type, and transportation costs. Every effort should be made to eliminate the plastic. If it cannot be eliminated, other changes can be made to assist the plants' recycling efforts.

a) Mold the appropriate plastic recycling code into the part. When elimination is not possible, these codes will allow for effective recycling.
b) Clear LDPE plastics are preferred and can be effectively recycled. Ship plastics uncontaminated with paints and lubricants.
c) Replace the plastic with a paper substitute.
d) Any plastic cap, plug, spacer, etc. not required for packaging or shipping protection must be removed prior to shipment.

35. GLOSSARY OF TERMS

Adhesive - A material capable of attaching one surface to another. As used in connection with fibre boxes; a material to glue plies of solid fibreboard, to glue facings to corrugating medium in combined corrugated board, to glue the overlapping sides of a box forming the manufacturer's joint or to glue the flaps in closing a slotted box.

Box (Carton) - A rigid container having closed faces and completely enclosing its contents.

Brick Stacking - Act of alternating the stacking of containers on pallets, length by width and width by length.

Bursting Strength - The strength of material expressed in pounds per square inch.

Closure - The method used to seal a container once the parts have been packaged within it.

Deck - The horizontal load-carrying or load-bearing surface of a pallet.

Deck Opening - Any void in the deck caused by the spacing of surface elements or a cutout in a solid deck pallet.

Deckboard - The surface element used in the construction of a pallet deck.

Dunnage - Devices or materials used to hold, secure, or protect goods during shipment.

Expendable – A pack that makes only one trip.

Edge Crush Test (ECT) – Corrugated board test to determine the force that will crush a standard size of board standing on an edge. ECT indicated the probable compression strength of the container made from the board.

Footprint - The outermost dimensions (length and width) of a pallet, container or container system.

Four-way Pallet - A pallet constructed to allow insertion and withdrawal of handling equipment from all sides of the pallet.

Height -The overall dimension of the container in the vertical direction.

Mixed Load – more than one part number shipped on/or in a single secondary container.

Overhang - That portion of the unit load that exceeds the width or length dimension of a pallet. (Not allowable).

Pad - A corrugated or solid fibreboard sheet or other authorized material used for extra protection or for separating tiers or layers of articles when packed for shipment.

Pallet - A horizontal platform device used as a base for assembling, storing, handling, and transporting materials and products in a unit load.

Primary Container - The shippable container closest to the parts.

Protection – To protect the product from various hazards encountered in the distribution environment.

Rightsizing - Containerization that optimizes the entire material flow process from supplier to user.

Stringer - A continuous longitudinal board member of a pallet that supports the horizontal load carrying or load-bearing surface.

Tape - A strip of cloth or paper, sometimes having a filler or reinforcement, coated on one side with an adhesive. It is used to form the joint on a fibre box or to close or reinforce such a box. Closure and reinforcement can also be affected with pressure-sensitive tape.

Tare Weight - Weight of the container(s), excluding the weight of the parts.

Test; Bursting Strength (Mullen) - Measurement of the resistance of a material to bursting expressed in pounds per square inch. The test is made on a motor-driven Mullen tester.

Top Deck - Load-carrying surface.

Unit Load Height – The overall height of the primary containers when stacked on the secondary container, measured from the bottom of the secondary container to the top of the highest primary container. For bulk containers, it is the height of the secondary container.