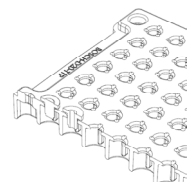


NA Supplier Packaging & Labeling Standards



Rev.0 – May, 2013

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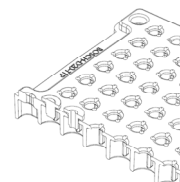


Supplier packaging/labeling standards

CONTENTS:

Page.

1.0 Introduction	3
1.1 Background	3
1.2 Scope	3
2.0 Supplier Responsibilities	3
2.1 Expendable Packaging	3
2.2 Packaging costs	9
2.3 Design considerations	9
2.4 Closure	9
2.5 Electro Static Discharge	9
2.6 Pallet Requirements	10
2.7 Returnable Packaging	12
3.0 Labeling Requirements	16
3.1 General Labels specifications	16
3.2 Format labels and packaging	16
3.3 Shipping/Parts ID label	17
3.3.1 Label layout	17
3.3.2 Shipping label data table	18
3.3.3 Shipping label example	19
3.4 Address label	20
3.4.1 Label data table	20
3.4.2 Label example	20
3.5 Mixed Load label	21
3.5.1 Label data table	21
3.5.2 Label example	21
3.6 Individual label for smallest unit	22
3.6.1 Label data table	22
3.6.2 Label example	22
3.7 Odette, Euro-Supplier Labeling Option	23
3.7.1 Odette Label	23
3.7.2 Odette Label Layout	24
3.7.3 Odette Label data table	24
3.7.4 Odette Label example	26
3.7.5 Container Odette Label	26
3.7.6 Container Odette Label Layout	27
3.7.7 Container Odette Label example	27
3.8 Label Placement	28
4.0 Identification on supplier containers	36
5.0 Bosch Packaging Data Sheet	36



1. Introduction

1.1 Background

Robert Bosch, LLC (in the following referred to as Bosch for short).

All suppliers must collaborate with Bosch to promote packaging methods to ensure that products and packaging arrive in the same quality condition in which they were manufactured.

1.2 Scope

The following guidelines are fundamental to the correct delivery, storage and transportation of products. These were prepared by NA Bosch Packaging Engineering to assist supplier in developing the most effective, environmental and economical packaging to meet Bosch quality standards.

Non Compliance could result in a missed shipment being recorded on the Logistics PLKZ **Problem Lieferanten Kennzahl** (Critical Supplier Performance Indicator) and/or result in the issuance of a Quality Deficiency Report. In this case supplier may be charged for additional costs incurred for shipments that do not comply with these guidelines.

2. Supplier Responsibilities

In order to satisfy Bosch's quality standards regarding part quality, all suppliers must provide packaging that can protect the products through its way to final destination and intended point of use.

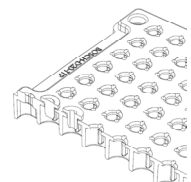
2.1 Expendable Packaging

Supplier is fully responsible for design and implementation of any expendable packaging according to Bosch standards. This includes both primary and back-up expendable packaging. Back-up expendable packaging dimensions must be less than or equal to the returnable packaging dimensions and have the same standard pack quantity. The supplier is required to keep back-up expendable packaging at their facility by the amount necessary to ensure no disruptions of shipments will occur to Bosch.

Supplier is responsible to perform validation tests to assure that the product and packaging will withstand "real world" load conditions, handling and any applicable transportation modes. Supplier must retain records that document the validation test method and passing results for any expendable packaging design.

Back-up expendable packaging can only be used upon previous authorization from Bosch.

Additional costs due to packaging damage, corrosion, and / or failure by the supplier to provide packaging, will not be accepted by Bosch.

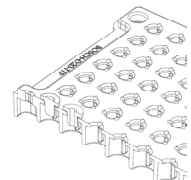
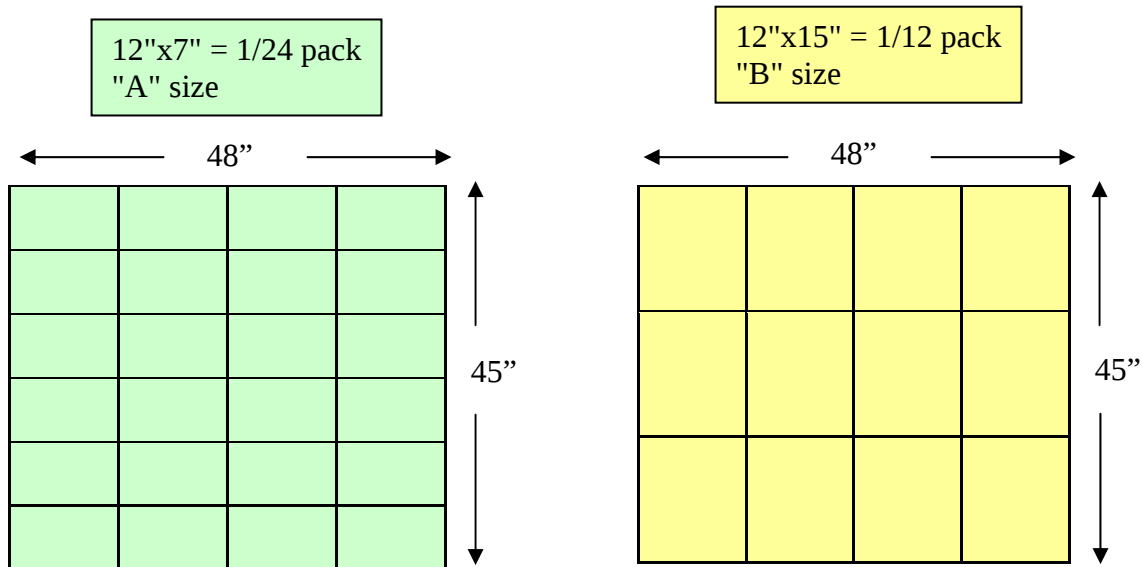


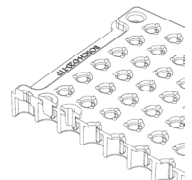
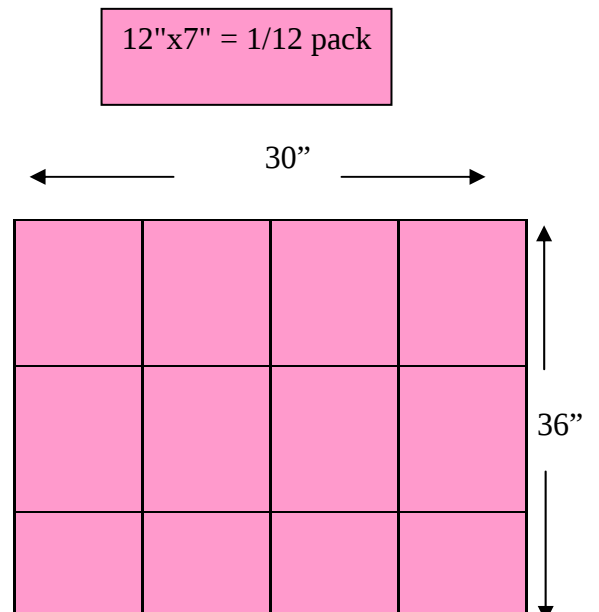
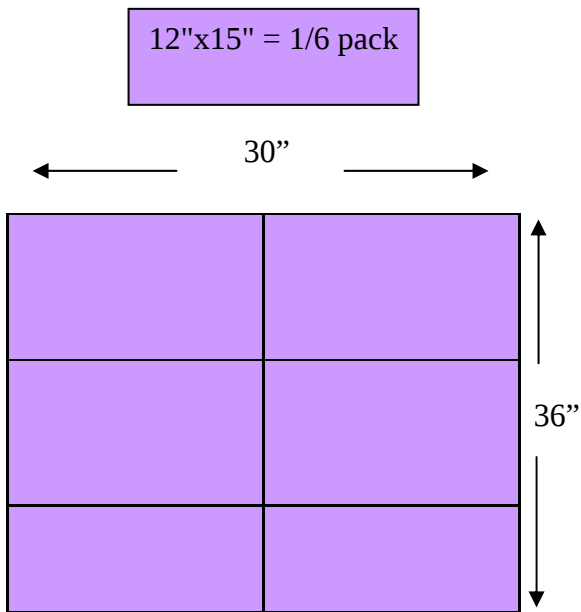
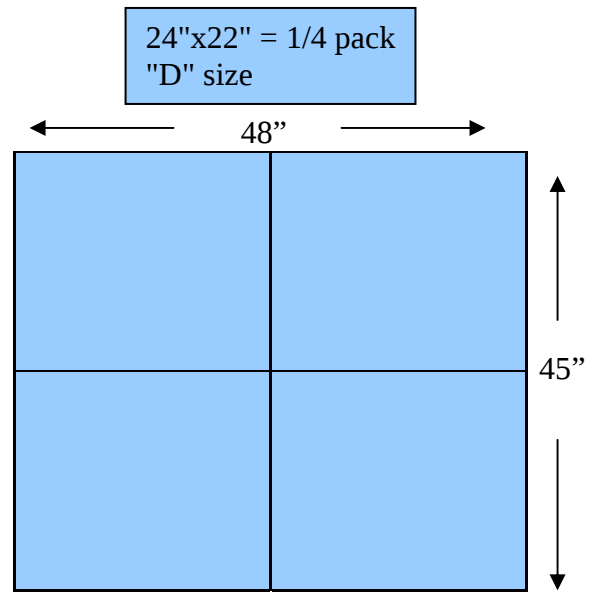
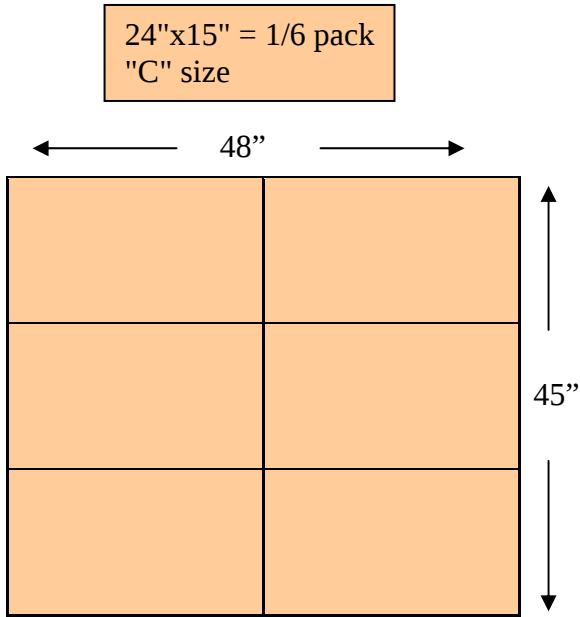
North American permitted dimensions of cartons:

North America Pallet Dimensions					
External Dimensions					
	Length	Width	Height	Pallets	Max Height
Wood Pallet A	48" (1219mm)	45" (1143mm)	5" (127mm)	-	-
Wood Pallet B	36" (914.4mm)	30" (762mm)	5" (127mm)	-	-
Unit Load A	48" (1219mm)	45" (1143mm)	50" (1270mm)	2	100" (2540mm)
Unit Load B	36" (914.4mm)	30" (762mm)	40" (1016mm)	2	80" (2032mm)

Unit Load A	Carton Options				MAX Box Height	Layers
	A	B	C	D		
					4.5" (114.3mm)	10
					6.8" (172.7mm)	6
					8.8" (223.5mm)	5
					10.9" (276.9mm)	4
					13.8" (350.5mm)	3

Unit Load B	Carton Options		MAX Box height	Layers
	A1	B1		
			4.5" (114.3mm)	7
			6.8" (172.7mm)	5
			8.8" (223.5mm)	3





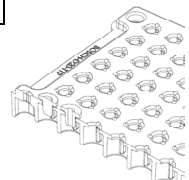
International permitted dimensions of cartons:

International Pallet Dimensions					
External Dimensions					
	<i>Length</i>	<i>Width</i>	<i>Height</i>	<i>Pallets</i>	<i>Total Height</i>
<i>Wood Pallet</i>	1140mm (44.9in)	980mm (38.6in)	143mm (5.63in)	-	-
<i>Unit Load A</i>	1140mm (44.9in)	980mm (38.6in)	1100mm (43.3in)	2	2200mm (86.6in)
<i>Unit Load B</i>	1140mm (44.9in)	980mm (38.6in)	733mm (28.9in)	3	2199mm (86.6in)
<i>Unit Load C</i>	1140mm (44.9in)	980mm (38.6in)	500mm (19.7in)	4	2000mm (78.7in)

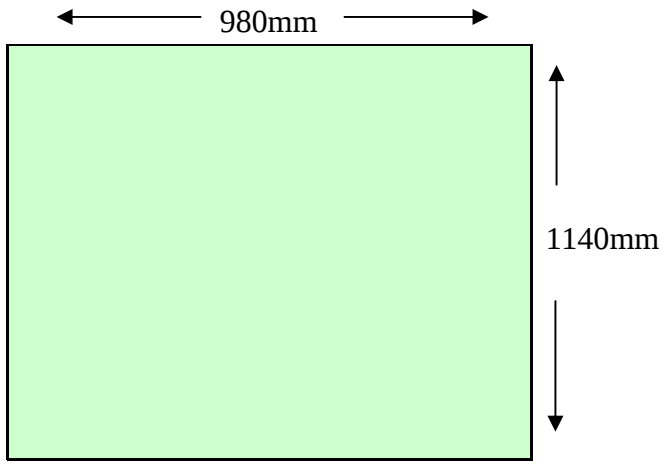
	<u>Carton Options</u>								
	A	B	C	D	E	F	G	Box Stack height (Approx.)	Layers
Unit Load A								957mm (38in)	1
								479mm (19in)	2
								319mm (13in)	3
								239mm (9in)	4
								191mm (8in)	5

	<u>Carton Options</u>								
	A	B	C	D	E	F	G	Box Stack height (Approx.)	Layers
Unit Load B								590mm (23in)	1
								295mm (12in)	2
								197mm (8in)	3
								148mm (6in)	4
								118mm (5in)	5

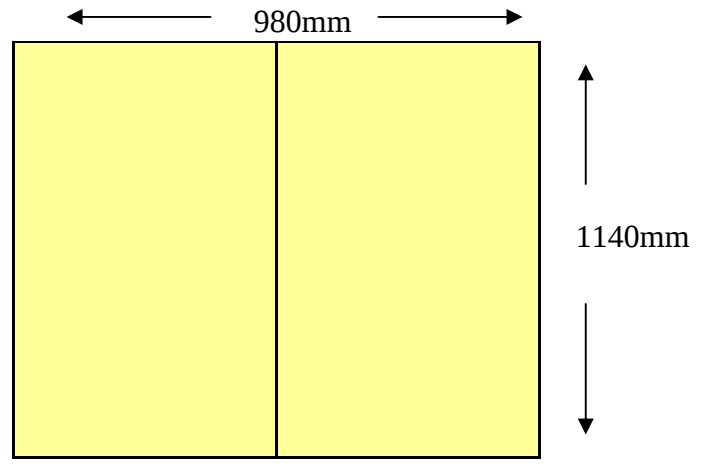
	<u>Carton Options</u>								
	A	B	C	D	E	F	G	Box Stack height (Approx.)	Layers
Unit Load C								407mm (16in)	1
								204mm (8in)	2
								136mm (5in)	3
								102mm (4in)	4
								81mm (3in)	5



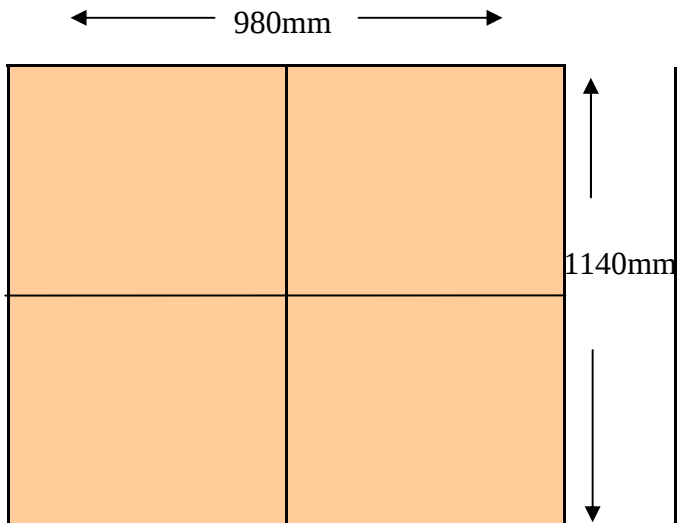
1140mm x 980mm = 1/1 pack
"A" size



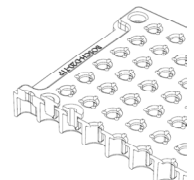
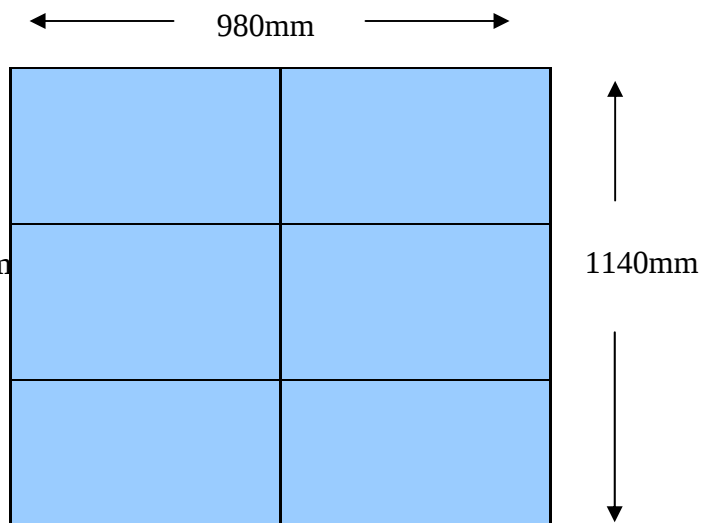
1140mm x 980mm = 1/2 pack
"B" size

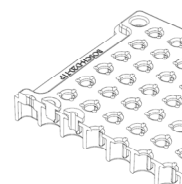
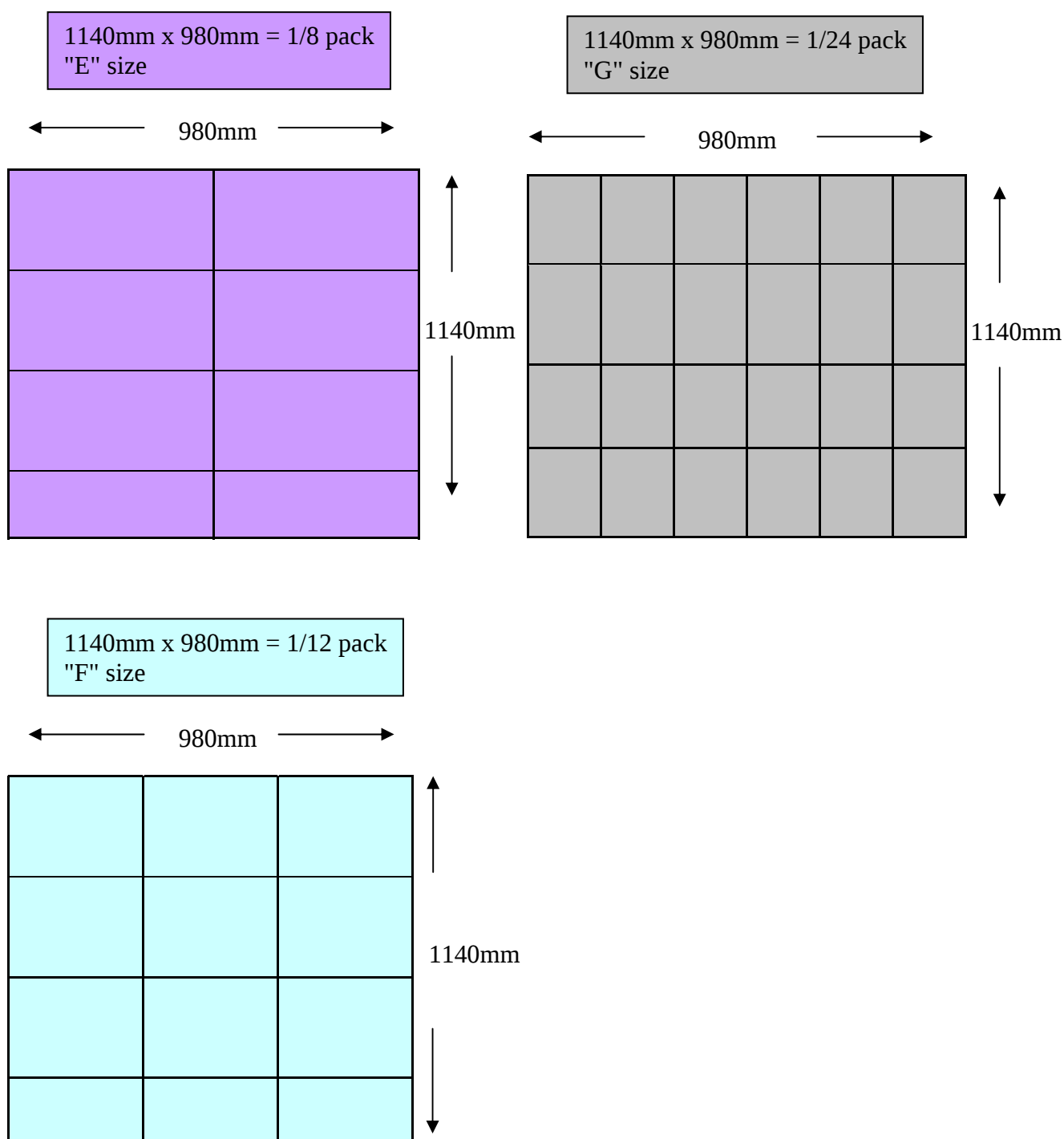


1140mm x 980mm = 1/4 pack
"C" size



1140mm x 980mm = 1/6 pack
"D" size





2.2 Packaging costs

Expendable packaging cost must be identified and integrated as part of piece price. Cost can only be agreed by purchasing department.

2.3 Design considerations

- 2.3.1 All manually handled packages must be less than 30 lbs (13.6 kgs) and unit loads must be less than 2000 lbs (908 kg).
- 2.3.2 Any expendable packaging must protect parts from quality issues such as corrosion, contamination, and damage under any INCOTERM conditions. Resulting costs from contaminated or damaged parts will not be accepted by Bosch.
- 2.3.3 If parts are shipped other than agreed mode of transportation, supplier is required to provide adequate packaging to protect the parts.

2.4 Closure

- 2.4.1 Any methods used for securing containers should avoid cutting to gain access to parts.
- 2.4.2 Plastic or paper sealing tape is the only acceptable method to close boxes or containers for Bosch.

2.5 Electrostatic discharge protection EPA

- 2.5.1 Any packaging that contains electrostatic discharge sensitive parts must have a resistance between 1×10^4 and 1×10^9 ohms according to Bosch norm N55 D4 attached below.

Transport means and packaging in the EPA (See attached or click over icon) 

- 2.5.2 In case the packaging has surface resistance between 1×10^9 and 1×10^{11} ohms has to discharge from 1000V to 100V within or less than 2 seconds according to Bosch norm N55 D4 attached above. In case of incur in this deviation tests must be performed under the Bosch norm N55 E 1.4.3 and E 2.2 attached below or DIN EN61340.

Measurement procedures for means of transport packaging - E1.4.3

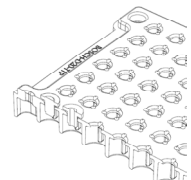
(See attached or click over icon) 

Measurement procedures for determining field strength and derived quantities

E 2.2 (See attached or click over icon) 

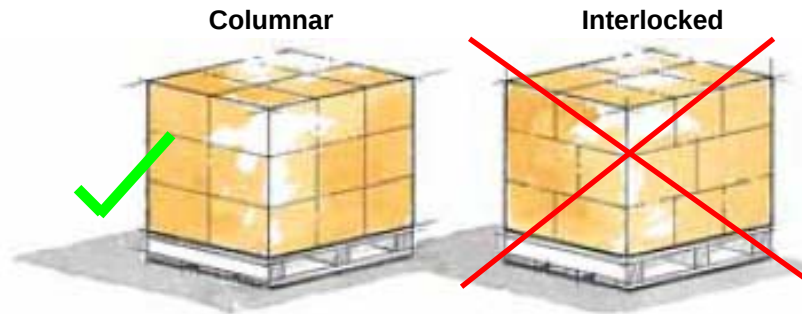
- 2.5.3 Packaging must be identified with a standard label according to Bosch norm N55 D5 2.4 Attached below.

Labels in the EPA (See attached or click over icon) 



2.6 Pallet requirements

- 2.6.1 All packaging and palletized loads must be stackable. If part configuration or weight requirements do not permit stacking, prior approval is required from Bosch Packaging Engineering.
- 2.6.2 All pallets (footprint) must have 4 way entries to allow handling by industrial forklifts.
- 2.6.3 Single wing or double wing pallets are not allowed.
- 2.6.4 Pallets must be stringer or block construction.
- 2.6.5 Pallets must be larger in length and width than the load. No packaging materials may overhang the pallet.
- 2.6.6 Pallet loads must be uniform and in complete layers. Pyramid loads are not allowed under any circumstance.
- 2.6.7 Bosch requires columnar stacking. Load capacity is reduced up to 50% during interlocked stacking.

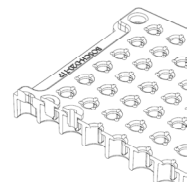
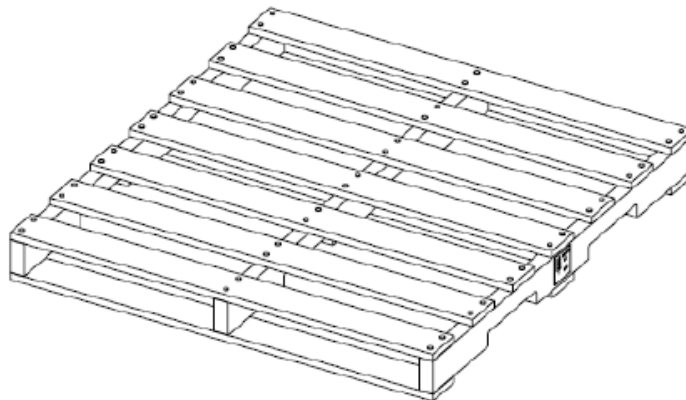


- 2.6.8 Pallet construction and quality must be adequate to support the load weight and handling requirements. Inka and Presswood pallets are not allowed.
- 2.6.9 Pallet dimension must conform to Bosch Standards as follows:

North American permitted dimensions of pallet (Shipping pack, AIAG standard)

- 4 way entry wooden pallet, notched stringer.

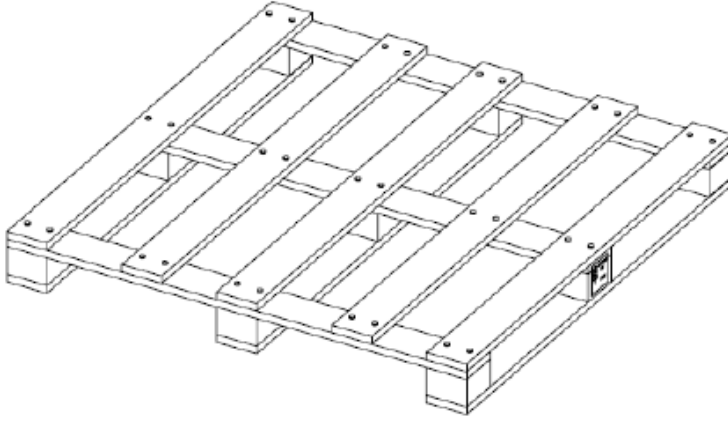
Length	Width	Height
48" (1219mm)	45" (1143mm)	5" (127mm)
36" (914mm)	30" (762mm)	5" (127mm)



European, Asia, South America, other international suppliers permitted dimensions of Pallet (Shipping pack, VDA Standard)

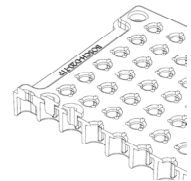
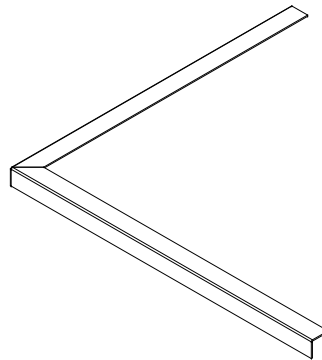
- 4 way entry wooden block pallet.

Length	Width	Height
1140mm	980mm	143mm



* Packaging Engineering may provide pallet design drawings if required.

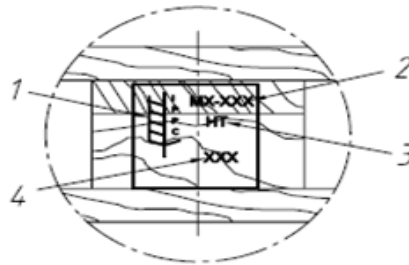
- 2.6.10 All expendable packaging must be secured to pallets by non-metallic banding, with a minimum of 2 bands per pallet. Stretch wrap could be used as additional securing method. Stretch wrap must be transparent to allow visibility of all labels.
- 2.6.11 All pallet cartons (collective carton boxes / overpack) must be constructed with an accessibility feature (eg drop doors).
- 2.6.12 Support options, if not using an overpack, supplier may use paper cornerboards, stretch wrap, and / or wood cornerboards. Supplier must obtain prior approval from Bosch.



Corner Board (Fiber) Edge Crush test Chart

Thickness (inches)	Compression strength (kgf/lbf)
0.080	350 kgf / 770 lbf
0.090	400 kgf / 880 lbf
0.100	450 kgf / 990 lbf
0.120	530 kgf / 1166 lbf
0.140	610 kgf / 1342 lbf
0.160	690 kgf / 1528 lbf
0.180	770 kgf / 1694 lbf
0.200	850 kgf / 1870 lbf
0.225	950 kgf / 2090 lbf
0.250	1050 kgf / 2310 lbf
0.275	1150 kgf / 2530 lbf
0.325	1350 kgf / 2970 lbf
0.400	1650 kgf / 3630 lbf

Export Suppliers: Requirement that all Wooden pallets or packaging parts must be heat treated under **IPPC international standard**. (See attached or click over icon) 



The heat treatment ID could be presented in different sizes and fixations depending on the surface conditions, and it must contain:

- 1. Certified logo*
- 2. Supplier registry number*
- 3. HT initials*
- 4. Company name, date or others are also allowed.*

2.7 Returnable Packaging

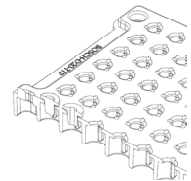
Returnable Packaging shall be used when it is cost effective or when it is needed to meet specific Bosch objectives. When returnable packaging is not justifiable or feasible, environmentally friendly materials (recyclable) shall be used. If returnable packaging is required, suppliers shall be responsible for storing returnable packaging at their site.

- 2.7.1 A Bosch Packaging proposal will be submitted to obtain supplier input or collaboration. When supplier designs packaging, the packaging guidelines are intended to recommend the design of packaging to be agreed upon with Bosch.

- 2.7.2 Bosch calculates and orders the packaging loop for Bosch owned packaging programs. Supplier can purchase additional packaging to support higher inventory levels (eg. bank builds, batches, long production runs, etc) if necessary.
- 2.7.3 For Supplier owned packaging, Bosch will review the loop sizing proposal from the supplier and then determines the amount of day's inventory for the loop. The supplier orders the packaging upon Bosch approval.
- 2.7.4 It is the supplier's responsibility to receive and store the initial fleet of packaging provided by Bosch.
- 2.7.5 Supplier is responsible for product integrity regarding corrosion and must propose different alternatives to protect parts until point of use.
- 2.7.6 Supplier is responsible to maintain packaging in good conditions using it only for its intended purpose of sending products to Bosch. Supplier is required to store packaging indoors, in a safe, clean and dry environment. Packaging is not to be stored outdoors.
- 2.7.7 All labels and stickers must be placed in designated areas; any misplacement of these must be removed by Supplier.
- 2.7.8 Supplier must run scheduled inventories as requested and inform Bosch about any deviation of the loop quantity.
- 2.7.9 It is responsibility of each supplier to inform Bosch for any receipt of damaged packaging or deviation to the agreed standard. The Supplier is not allowed to dispose any returnable packaging without authorization from Bosch. Bosch will work with suppliers on the final disposition of damaged packaging.
- 2.7.10 Bosch returnable packaging is not allowed to be used for work-in-process (WIP) or bank-build situations.
- 2.7.11 The supplier is responsible for cleanliness of returnable packaging, unless otherwise expressly agreed with Bosch at the receiving Bosch facilities. Written agreement required from Bosch Purchasing and Logistics.
- 2.7.12 If the supplier is out of returnable packaging, previous authorization is required from Bosch to ship in approved back-up packaging.
- 2.7.13 All conditions regarding property and duty are established on the packaging agreement which will be delivered by Bosch and must be signed by Purchasing and Supplier.

North American permitted dimensions of returnable tote / lid packaging:

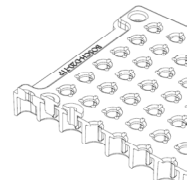
- a) All hand held totes must be standard light grey in color. ESD totes are an exception, and may be black in color.
- b) All tote lids must be standard light grey in color. ESD lids are an exception, and may be black in color.
- c) All containers must contain two "Property of Robert Bosch" hot stamps.
- d) The color of the hot stamps must be white
- e) Each hand held tote must include 2 Kennedy 4.5" x 6.5" white label placards.
- f) If custom identification is required on each tote such as part numbers or supplier information a custom sticker should be applied that either can be removed or covered up if necessary.
- g) Lids may or may not be necessary for a project. This will be determined based on the specific projects needs.



#	Dimensions (in) Totes			Dimensions (mm) Totes		
1	L	W	H	L	W	H
2	12	7	5	305	178	127
3	12	15	5	305	381	127
4	12	15	7	305	381	178
5	12	15	9	305	381	229
6	14	8	7	356	203	178
7	16	15	7	407	381	178
8	24	15	4	610	381	102
9	24	15	5	610	381	127
10	24	15	7	610	381	178
11	24	15	9	610	381	229
12	24	15	14	610	381	356
13	24	15	11	610	381	280
14	24	22	7	610	559	178
15	24	22	11	610	559	280

North American permitted dimensions of returnable pallet packaging:

- h) All pallets must have four (4)-way entries.
- i) All pallets are to be AIAG standard size unless part length determines the length of the pallet. Refer to the Standard Pallet Chart.
- j) When a returnable pallet is used, a top cap must be used to ensure part integrity and stackability.
- k) All returnable pallets must be black in color.
- l) All pallets should be constructed of durable, returnable and/or recyclable materials. If a shortage exists and wood pallets must be used, they should be used until additional returnable pallets are made available.
- m) All pallets caps must be either marked or hot stamped in white as "Property of Robert Bosch".
- n) A minimum of two hot stamps and or placards shall be placed on the shortest side of the pallet.
- o) Seat belts may be required (either 2 or 4) depending on the project specification. Bosch will determine whether 0, 2, or 4 seat belts are required.

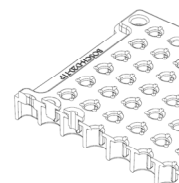


North American permitted dimensions of returnable top caps packaging:

- p) Top caps must be black in color and comply with the Bosch standard top cap chart.
- q) A minimum of 2 hot stamps are required on each top cap. Hot stamps should be applied to the shortest side.
- r) Seat belts may be required (either 2 or 4) depending on the project specification. Bosch will determine whether 0, 2, or 4 seat belts are required.

North American permitted dimensions of returnable palletainer packaging:

<i>Palletainer</i>		
<i>Length</i>	<i>Width</i>	<i>Height</i>
32"	30"	25"
32"	30"	34"
48"	45"	25"
48"	45"	34"



3. Labeling Requirements

The labels are designed to improve the productivity and controls at suppliers and Bosch, by allowing effective and efficient capture of data for production counts, warehouse input/output, shipper generation, receiving, payments and other inventory controls. Strict adherence to these specifications for the Shipping/Parts Identification Label will benefit both suppliers and Bosch.

This standard is intended to apply only to Bosch Plant units and associated suppliers. Suppliers must ensure that all materials shipped to Bosch are correctly labeled and that the labels are properly attached or inserted into the holders on the containers.

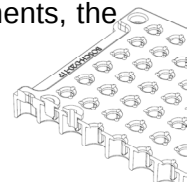
Labels are to adhere to the specifications as detailed and illustrated in the Automotive Industry Action Group's publication "Shipping/Parts Identification Label Standard" (AIAG-B-10) Version 3, June 2004. In case of conflict, Bosch Supplier packaging labeling/standards takes precedence.

3.1 General Label Specifications

- 3.1.2 Label Size (AIAG): 4.0 inches (102mm) high by 6.0 inches (152mm) or 6.5 inches (165mm) wide.
- 3.1.3 Minimum 2 labels per Shipping Pack on adjacent sides.
- 3.1.4 Label Color: White in color with black printing.
- 3.1.5 Adhesives: Adhesive types can be pressure sensitive or dry gummed as long as adherence to the package substrate is assured and application is wrinkle-free. Note: If labels are applied to returnable packaging, the adhesive must not leave a residue after the label is removed, and the label must be easily removed without tearing. Paper labels are not preferred on returnable packaging.
- 3.1.6 Returnable Packaging: Card holders can be used to contain and protect labels in conjunction with returnable packaging. Adhesive-backed labels shall be applied directly to placards or to stretch/shrink wrap.
- 3.1.7 DO NOT APPLY LABELS DIRECTLY TO THE RETURNABLE, unless the label stock is polyester material or equivalent AND the adhesive is classified as a "removable" type. **The supplier is responsible for the removal of all old labels.**
- 3.1.8 Data Identifiers: Use data identifier codes as defined by ANSI DI/AI standard MLH10.8.2 available from the American National Standard Institute (212)-642-4900 or their web site: <http://www.ansi.org/>.
- 3.1.9 Human Readable Zeroes (Ø): Show human readable zeroes (Ø) with a diagonal slash to differentiate them from alphabetic Os.

3.2 Format labels and packaging

The format labels are required depending on how material is packaged for shipments, the requested formats are:



Shipping/Parts ID label (For individual containers and pallets)
 Address label
 Mixed load label
 Individual label for small containers

3.3 Shipping/Parts ID Label

Shipping/Parts ID label is required when shipping multiple packages of the same part number on one pallet (e.g. several small cartons inside a larger pallet box).

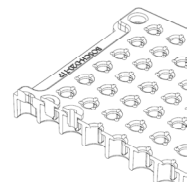
Each individual packs shall have a sub-pack label on each pack.

When a pallet requiring a shipping label is stretch or shrink wrapped, securely attach the shipping label to the outside of the wrap.

3.3.1 Label Layout (Not to scale)

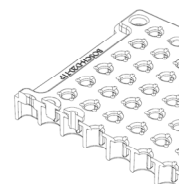
6" or 6.5" / 165mm			
PART NO. (P)			
QUANTITY (Q)	LOT NO. (1T)		
SUPPLIER (V)	PURCHASE ORDER NO. (K)		
SERIAL (S)	MFG. DATE EXP. DATE	ENG. LEVEL (2P)	
Supplier Name, Street Address, City, State ZIP Country			

4"
/
102mm



3.3.2 Label Data Table

DATA AREA NAME	DESCRIPTION	HUMAN READABLE CHARACTER HEIGHT	BAR CODE HEIGHT	DATA IDENTIFIER	COMMENTS
PART NUMBER (PART NO.)	Bosch designated part number.	.4-.5 in 10-13 mm	.5 in 13 mm	P	
QUANTITY	Part quantity	.5 in 13 mm	.5 in 13 mm	Q	
LOT NUMBER (LOT NO.)	Supplier lot number is used for lot traceability, and should therefore be associated with supplier internal processes, the time period manufactured, and the supplier's ability to do lot traceability with their own suppliers. Lot numbers can span multiple boxes and shipments, but shall never be reused!	.4-.5 in 10-13 mm	.5 in 13 mm	1T	Lot number can be composed of numbers and letters, spaces and grammatical symbols are not acceptable. Maximum 12 characters.
SUPPLIER CODE (SUPPLIER)	Bosch designated supplier code.	.25 in 6.5 mm	.4 in 10 mm	V	
SERIAL NUMBER (SERIAL)	Unique sequence of characters designated by the supplier. This number will enable the supplier to trace part history by manufacturing lot.	.25 in 6.5 mm	.4 in 10 mm	S	Letters, spaces or other grammatical symbols are not acceptable. Maximum number of characters 10.
DESCRIPTION & SUPPLIER PART NUMBER (DESCRIPTION)	Bosch's part description. Supplier part number is optional but must <u>not</u> be in bar code symbology.	.25-.5 in 6.5-13 mm	N/A	N/A	Locate description next to part number.
BOSCH'S PURCHASE ORDER NUMBER (P.O. NO.)	Bosch designated purchase order number.	.19-.25 in 4.8-6.5 mm	.4 in 10 mm	K	



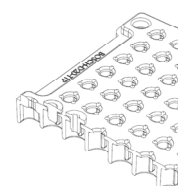
BOSCH'S PART REVISION LEVEL DESIGNATOR (ENG. LEVEL))	Bosch's part revision level designator as printed on Bosch's part print.	.19-.25 in 4.8-6.5 mm	.4 in 10 mm	2P	
MANUFACTURING & EXPIRATION DATE	Manufactured date of parts in pack. If item has a shelf life, include expiration date.	.125 in 3 mm	N/A	N/A	MM-DD-YY format. e.g. 09-30-04
SUPPLIER NAME	Supplier's name & address.	.125 in 3 mm	N/A	N/A	

NOTE: Spaces and grammatical symbols (*, %, \$, +, /, -) MUST NOT be used in the data.

Acceptable abbreviations are shown in column 1 within parenthesis (labeling data table 3.32).

3.3.3 Label Example (Not to scale)

PART NO. (P)		0204212030BKC15		DC MOTOR	
					
QUANTITY (Q)	10	LOT NO. (1T)	271042		
					
SUPPLIER (V)	12647	P.O. NO. (K)	9458		
					
SERIAL (S)	854236976	MFG. DATE 09/21/12	EXP. DATE 12/21/12	ENG. LEVEL (2P)	7
					
SUPPLIER, ANYSTREET, ANYCITY, ANYWHERE					



3.4 Address Label

In addition to the AIAG shipping/parts the shipping label used for pallets or skids, include 2 address labels on the outer shipping pack.

3.4.1 Label Data Table

DATA AREA NAME	DESCRIPTION	HUMAN READABLE CHARACTER HEIGHT	BAR CODE HEIGHT	DATA IDENTIFIER	COMMENTS
ADDRESS	Company, Street, city, State, Zip Code.	.5 in 13 mm	N/A	N/A	As specified in Purchase order.
DOCK AND/OR BUILDING	Specifies dock at multi-dock facility.	.313 in 7.9 mm	N/A	N/A	As specified by Bosch.
SID NO. (US) OR LIEFERSCHEIN NO (EUROPE)	Shipping identification number (Invoice number, delivery number, shipment number or packing list number).	.5 in 13 mm	.5 in 13 mm	2S	Spaces and grammatical symbols are not acceptable. Maximum 10 characters.

3.4.2 Label Example (Not to scale)

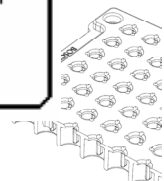
SHIP TO:

BOSCH CORPORATION
1234 MAIN STREET
HOMETOWN, SC
29777
DOCK #8 / BUILDING 102C

S.I.D.:
(2S)

163365A278


ABC INC, 27 ANYWHERE PLAZA, ANYSTATE 45777



3.5 Mixed Load Label

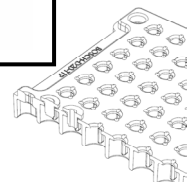
Mixed load packs are only permitted with prior approval from Bosch Packaging Engineering. The different part numbers within the mixed item pack must be separated and contained inside sub packs.

Mixed Load Label shall be placed where possible; the top of the label should be 20 inches (508mm) from the bottom of the container and centered left-to-right on the widest face of the pack.

3.5.1 Label Data Table

DATA AREA NAME	DESCRIPTION	HUMAN READABLE CHARACTERS HEIGHT	BAR CODE HEIGHT	DATA IDENTIFIER	COMMENTS
Supplier Code (Supplier)	Bosch Designated Supplier Code (6 or 8 digits)	.25 in. (6.5mm)	.4 in. (10mm)	V	Same as on Shipping/Parts I.D. Label
Serial Number (Serial)	Unique sequence of characters designated by the supplier.	.25 in. (6.5mm)	.4 in. (10mm)	5S	This number allows the supplier to track shipping pack history.

3.5.2 Label Example (Not to scale)



3.6 Individual label for smallest unit

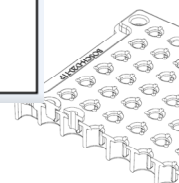
Individual labels are required when multiple packaging units are used within a sub-pack. E.g. Parts packed with bags in a sub-pack require individual labels.

3.6.1 Label Data Table

DATA AREA NAME	DESCRIPTION	HUMAN READABLE CHARACTER HEIGHT	BAR CODE HEIGHT	DATA IDENTIFIER	COMMENTS
PART NO.	Bosch designated part number.	9 mm	10 mm	P	As specified in Purchase order.
QUANTITY	Part quantity	9 mm	10 mm	Q	
SERIAL	Unique sequence of characters designated by the supplier. This number will enable the supplier to trace part history by manufacturing lote.	9 mm	10 mm	S	Letters, spaces or other grammatical symbols are not acceptable. Maximum number of characters 10.
ENGINEERING LEVEL	Bosch's part revision level designator as printed on Bosch's part print.	5 mm	N/A	N/A	
MFG. DATE	Manufactured date of parts in pack.	5mm	N/A	N/A	

3.6.2 Label Example (Not to scale)

PART NO. (P)	3419348710LID	
		
QUANTITY (Q)	23	ENGINEERING LEVEL 14
		
SERIAL (S)	5180812991	MANUFACTURED 11-21-2012
		
SUPPLIER, Anyroad, AnyCity, Any Country		



3.7 Odette, Euro-Supplier Labeling Option

Bosch recognizes the European Automotive Industry approved Odette transport label for the identification of packaging and container contents for suppliers located in Europe. However, Bosch strongly urges the use of the AIAG-B-10 standard label.

The label is 'A5' size, and has standard printing with the addition of bar coding. It may be self adhesive for expendable packaging, a tie on label for returnable packaging, or can be held in integral document holders on the container, if provided. Bosch will accept the Odette label format with bar coding provided that it conforms to the Odette standard and satisfies informational requirements in this specification.

Include Delivery Note Number on Odette labels.

The full specification of the label is obtainable from the Odette organization through the national offices of the SMMT (UK) and the VDA (Germany) representing ODETTE.

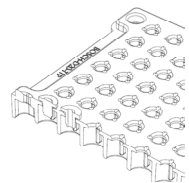
3.7.1 Odette Label

Odette master labels are required when shipping multiple packages of the same part number on one pallet. (e. g. several small cartons inside a larger pallet box). The quantity on the master Label SHALL be the total in all the sub-packs.

Individual packs (sub-packs) shall have an Odette master label on each pack.

A unique serial number must be placed on the master label and the data identifier S must be used on Odette master labels. When a master label is used, serial numbers on individual sub packs also are requested.

When a shipping pack requiring a master label is stretch or shrink wrapped, securely attach the master label to the outside of the wrap.



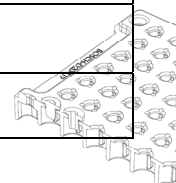
3.7.2 Odette Label layout (Not to scale)

RECEIVER	DOCK/GATE			5.83in/148mm
(N) DELIVERY NOTE NO.	SUPPLIER ADD.			
	NET WT (KG)	GROSS WT (KG)	NO. BOXES	
(P) PART NO.				
(Q) QUANTITY	DESCRIPTION			
	SUPPLIER PART NO.			
(V) SUPPLIER	PURCHASE ORDER			
	PROD. DATE	EXP. DATE	HAZZARD CODE	
(S) SERIAL	(M) LOT NO.		(2P) REVISION	
8.27in/210mm				

3.7.3 Odette Label data table

SHIPPING SECTION

DATA AREA NAME	DESCRIPTION
Receiver	Robert Bosch LLC
Dock/Gate	Bosch address and Dock
Gross Wt.	Total transport unit weight
Net Wt.	Material weight within transport unit.
No. of boxes	Number of packages within one transport unit
Supplier Address	Supplier's name and address, country of origin.



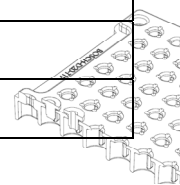
PARTS IDENTIFICATION SECTION

DATA AREA NAME	DESCRIPTION	BAR CODE IDENTIFIER	COMMENTS
Delivery Note No.	Supplier's reference number e.g. Delivery Note number or Packaging Slip number	N	
Part No.	Bosch's Part number	P	
Quantity	Part quantity	Q	
Supplier	Supplier code	V	
Serial Number	Unique sequence of characters designated by the supplier. This number will enable the supplier to trace part history by manufacturing lot. Each printed labels must have a different and sequence serial number , e.g. if the packaging consist of individual containers, each container must have different serial number in the "Individual Odette Label" and for the complete pallet must have another different serial number in the "Odette label".	S	Letters, spaces or other grammatical symbols are not acceptable. Maximum number of characters 10.
Lot no.	Supplier lot number. Supplier lot number is used for lot traceability, and should therefore be associated with supplier internal processes, the time period manufactured, and the supplier's ability to do lot traceability with their own suppliers. Lot numbers can span multiple boxes and shipments, but shall never be reused!	H	Lot number can be composed of numbers and letters, spaces and grammatical symbols are not acceptable. Maximum 12 characters.
Revision	Bosch's engineering change number	2P	

NOTE: Spaces and grammatical symbols (*, %, \$, +, /, -) MUST NOT be used in the data.

SPECIAL DATA SECTION

DATA AREA NAME	DESCRIPTION
Description	Bosch's part description
Supplier Part No.	Supplier's part number.
Purchase Order	Purchase Order Number
Date	Material production date, dispatch date
Expiration Date	Latest date for use.
Hazzard Code	Omit this field



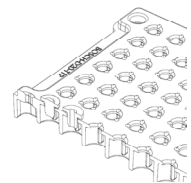
The use of non-mandatory data items within the Shipping Section and Special Data Area is to be agreed between supplier and buyer. No alternative data other than that specified is permitted, i.e. where data fields are not used they must be left blank.

3.7.4 Odette Label example (Not to scale)

RECEIVER Robert Bosch LLC.		DOCK/GATE Robert Bosch LLC, 123 ANYSTREET, ANYWHERE 123456	
(N) DELIVERY NOTE NO. 2971828 		SUPPLIER ADD. CH-9435 HEERBRUGG, SWITZ.	
		NET WT (KG) 123 KG	GROSS WT (KG) 200 KG
		NO. BOXES 1	
(P) PART NO. 9132890000 			
(Q) QUANTITY 100 		DESCRIPTION LUBRICANT	
		SUPPLIER PART NO. 3530871	
(V) SUPPLIER 91076 		PURCHASE ORDER 479936	
		PROD. DATE 07-28-12	EXP. DATE 07-28-02
		HAZZARD CODE	
(S) SERIAL 12469 		(H) LOT NO. 13563178 	2P (REVISION) 4 

3.7.5 Container Odette Label

An Odette Master Label **SHALL** be used to identify the total contents of a multiple, common item pack. Each sub-pack/container of the multiple packs **SHALL** be identified with a Container Odette label in a location specified by Bosch.



3.7.6 Container Odette Label Layout (Not to scale)

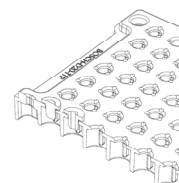
RECEIVER	DOCK/GATE	(N) DELIVERY NOTE NO.	
(P) PART NO.			
(Q) QUANTITY.		DESCRIPTION	
(M) SUPPLIER		(30\$) SUPPLIER PART. NO.	
(S) SERIAL NO.		DATE	REVISION
		(H) LOT NO.	

8.27in/210mm

2.91in/74mm

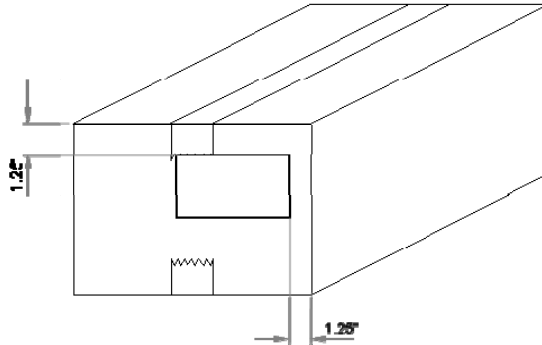
3.7.7 Container Odette Label example (Not to scale)

RECEIVER Robert Bosch LLC	DOCK/GATE Robert Bosch LLC, 123 ANY STREET, ANYWHERE 123456	(N) DELIVERY NOTE NO. 2595160
(P) PART NO. 5996820000		
(Q) QUANTITY. 10	DESCRIPTION LUBRICANT	
(M) SUPPLIER 910276	(30\$) SUPPLIER PART. NO. 1234567890	
(S) SERIAL NO. 1234567890	DATE 07/28/97	REVISION 4
	(H) LOT NO. 1234567890	



3.8 Label Placement

Labels should be placed no closer than 1.25 inches (32mm) from any container edge, on the side of the container with the bars perpendicular to the base of the container.



When label locations are identified on customer containers (especially on returnable containers) they shall not be applied outside the defined area.

Labels must be accessible for scanning at shipping, transportation and receiving operations.

Each supplying locations shall be responsible to ensure that bar code-marked labels and tags are sufficiently secured and protected and applied wrinkle-free so they are readable at point of final customer usage.

The labels shall be placed according the type of container.

AIAG standard labels placement.



Shipping label (With total quantity of pieces per pallet)



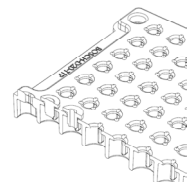
Shipping label (With partial quantity of pieces per box or tote)



Address label

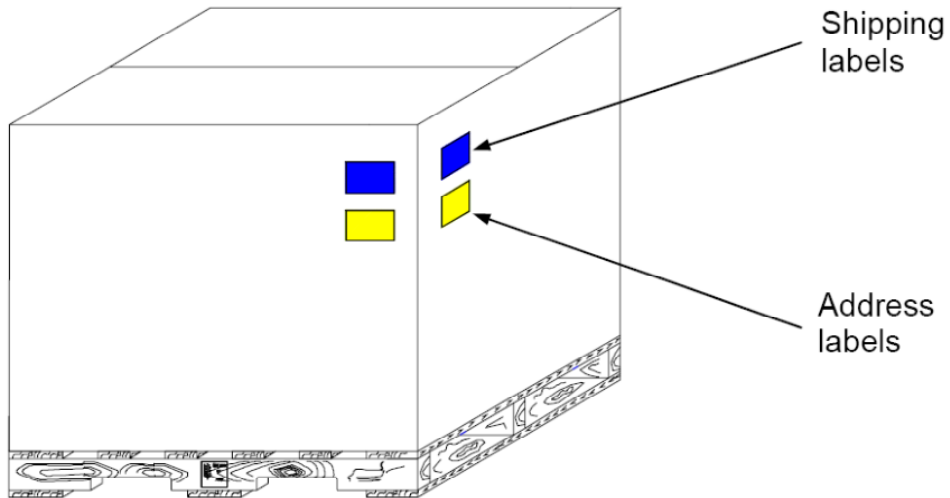


Mixed load label



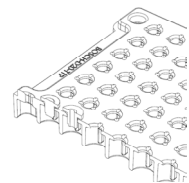
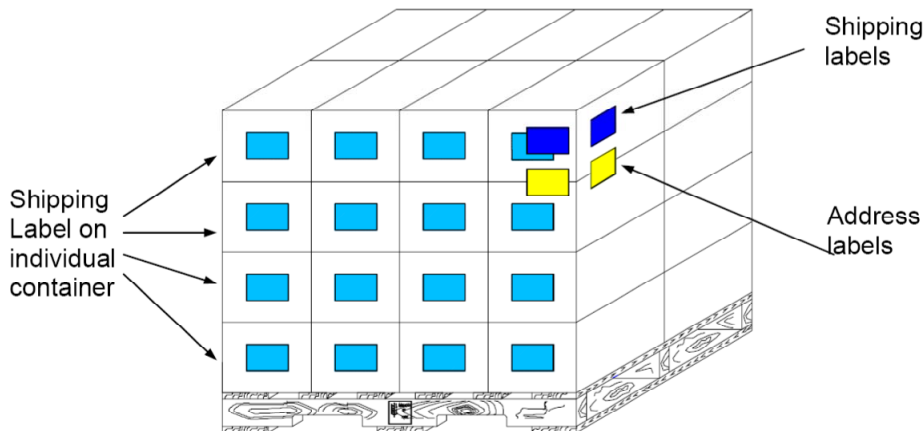
3.8.1 Packaging composed of a collective box with a unique part number:

- Two "Shipping Labels" with the total quantity of material, must be placed on right upper corner in long side and left upper corner in short side. These labels must be equal; the serial number must be the same for both labels.
- Two "Address Labels" must be placed below "Shipping Label".



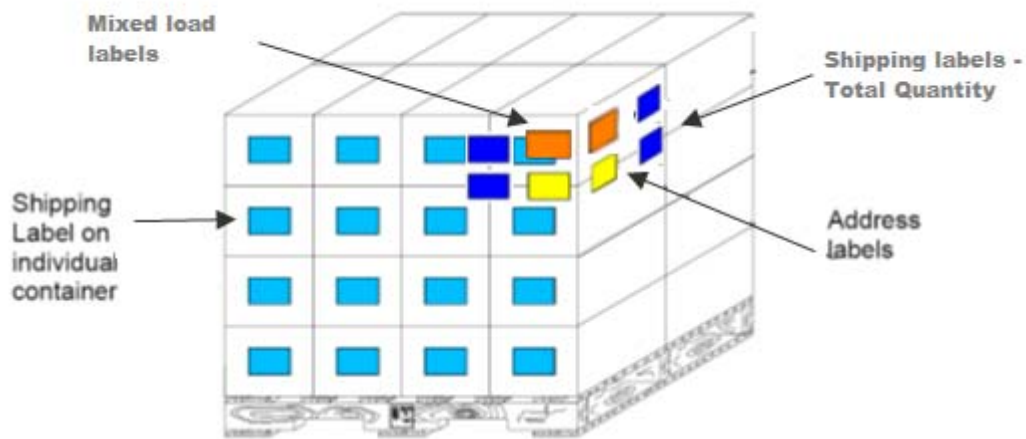
3.8.2 If a pallet is formed by individual containers with a unique part number:

- Two "Shipping Labels" with the total quantity of material, must be placed on right upper corner in long side and left upper corner in short side.
- Two "Address Labels" must be placed below "Shipping Label".
- One "Shipping Labels" with the quantity of material in a container, must be placed in the short side.



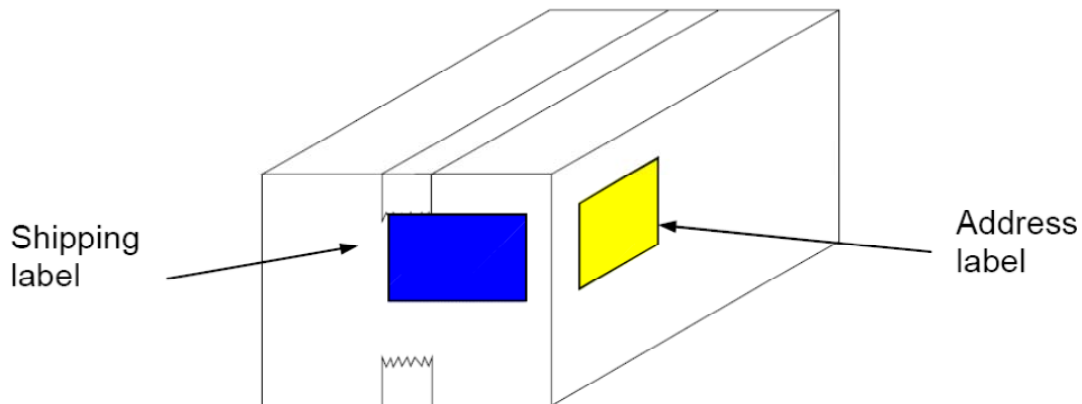
3.8.3 Pallet composed of individual containers and mixed parts:

- Two “Mixed labels”, must be placed on right upper corner in long side and left upper corner in short side.
- Two “Address Labels” must be placed below “Mixed labels”.
- One “Shipping Label” per container with the quantity of material in a container, must be placed in the short side.
- Two “Shipping Labels” for each part number with the total quantity per part number.



3.8.4 When the shipment consist of a single pack:

- A “Shipping label” with total quantity of material, must be placed on right upper corner in short side.
- An “Address label” must be placed on left upper corner in long side.



Odette standard labels placement.



Odette label (With total quantity of pieces per pallet)



Odette label (With partial quantity of pieces per box or tote)



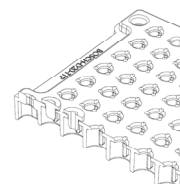
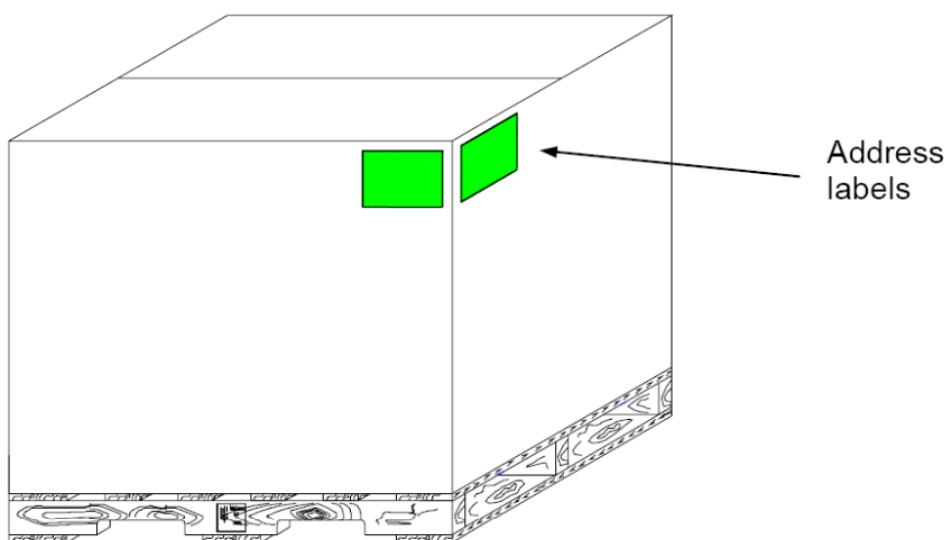
Container Odette label



Mixed load label

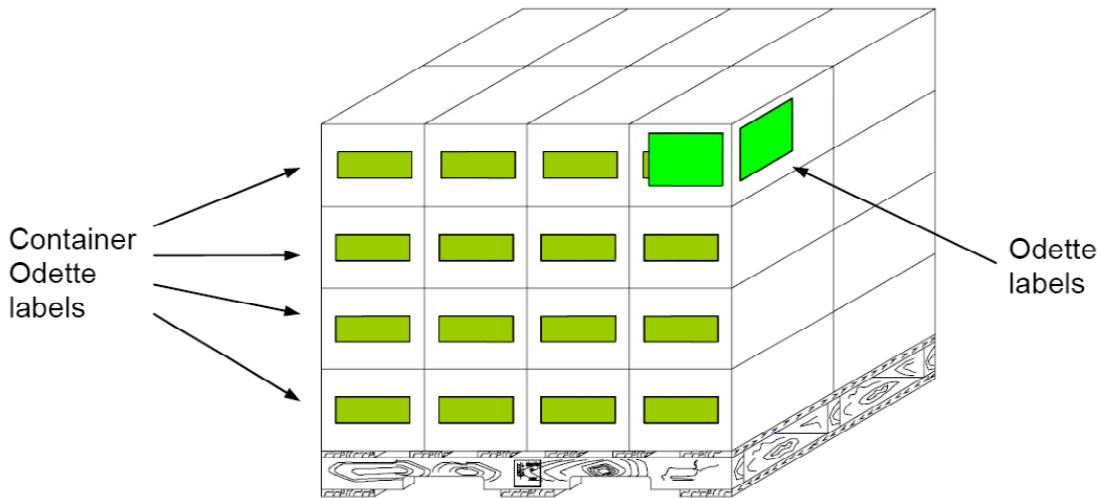
3.8.5 Packaging composed of a collective box with a unique part number:

- Two “Odette Labels” with the total quantity of material must be placed on right upper corner in long side and left upper corner in short side (Adjacent sides) of the complete pallet. These labels must be equal; the serial number must be the same for both labels.



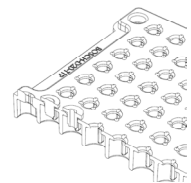
3.8.6 If a pallet is formed by individual containers with a unique part number:

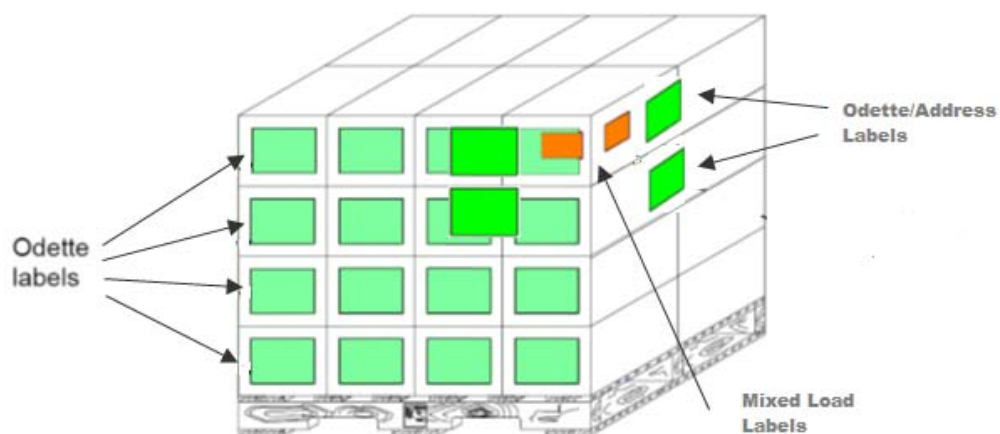
- Two “Odette Labels” with the total quantity of material must be placed on right upper corner in long side and left upper corner in short side (Adjacent sides) of the complete pallets.
- One “Container Odette Label” with the quantity of material in a container, must be placed in the short side (Visible sides).



3.8.7 Pallet composed of individual containers and mixed parts:

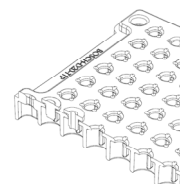
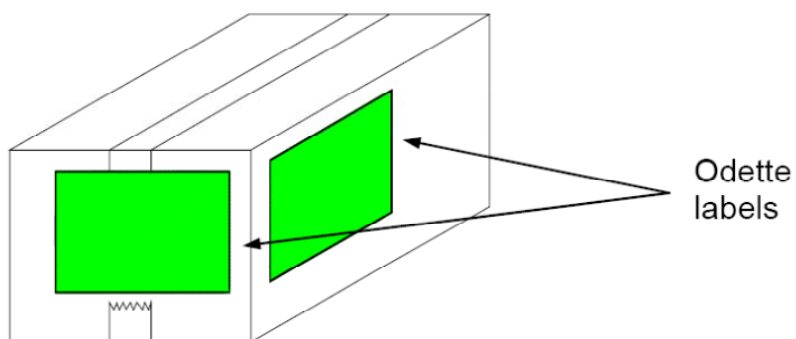
- Two “Mixed labels” must be placed on right upper corner in long side and left upper corner in short side (Adjacent sides) of the complete pallets.
- One “Odette Label” with the quantity of material in a container, must be placed in a short side (Visible sides) of the individual box.
- Two “Odette/Address Labels” for each part number with the total quantity per part number.



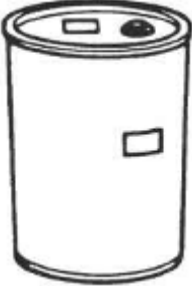
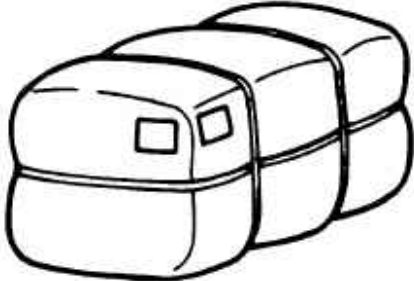
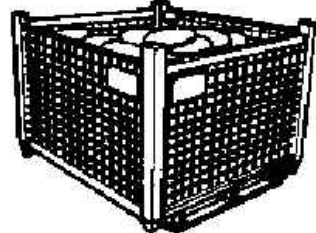
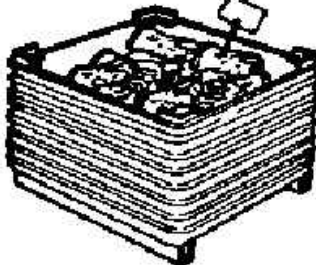
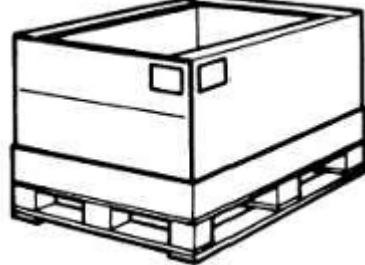


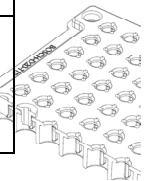
3.8.8 When the shipment consist of a single pack:

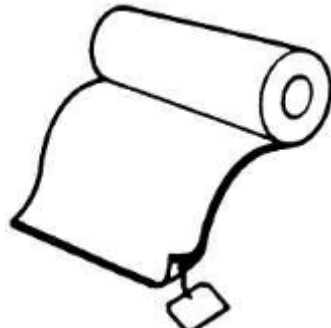
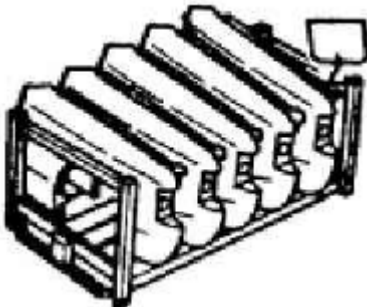
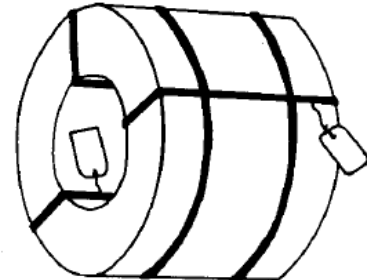
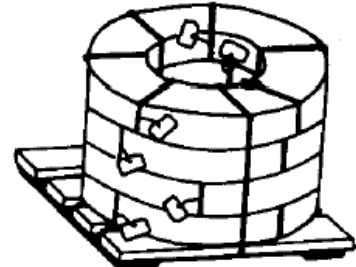
- Two “Odette Labels” with the total quantity of material must be placed on left upper corner in long side and right upper corner in short side (Adjacent sides) of the single pack.

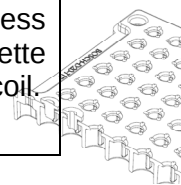


Other suggested labels placement on various shipping packs

	Drums, Barrels, or Cylindrical Containers Identical labels shall be located on the top and near the center of the side. Two shipping labels and two address labels for AIAG standard or two Odette labels for Odette standard.
	Bales Identical labels shall be located at the upper corner of an end and the adjacent side or as agreed to by the trading partners (wrap around label is acceptable). Two shipping labels and two address labels for AIAG standard or two Odette labels for Odette standard.
	Basket, Wire Mesh Container Identical labels shall be located on two adjacent sides or as agreed to by the trading partners. Two shipping labels and two address labels for AIAG standard or two Odette labels for Odette standard.
	Metal Bin or Tub Tag one visible piece near top, or use a label holder or as agreed to by the trading partners. A shipping label and an address label for AIAG standard or an Odette labels for Odette standard.
	Pallet Box Identical labels shall be located on two adjacent sides or as agreed to by the trading partners (wrap around label is acceptable). Two shipping labels and two address labels for AIAG standard or two Odette labels for Odette standard.
	Bundle Identical Tags shall be located at each end.



	A shipping label and an address label for AIAG standard or an Odette labels for Odette standard.
	Bag Place one label at the center of face. A shipping label and an address label for AIAG standard or an Odette labels for Odette standard.
	Roll This example is no longer appropriate. If used, must be in a container labeled on 2 adjacent sides or as agreed to by the trading partners. A shipping label and an address label for AIAG standard or an Odette labels for Odette standard.
	Rack This example is no longer appropriate. If used, must be labeled on 2 adjacent sides or as agreed to by the trading partners (may require 2,3, or more labels). A shipping label and an address label for AIAG standard or an Odette labels for Odette standard.
	Coil Hang two identical labels inside and outside coil, attached to banding. Two shipping labels and two address labels for AIAG standard or two Odette labels for Odette standard.
	Slit Coils Hang two identical labels inside and outside each slit coil, attached to banding. Two shipping labels and two address labels for AIAG standard or two Odette labels for Odette standard on each coil.



4. Identification of supplier containers

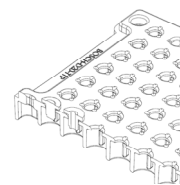
- 4.1 All containers must be identified with a set of symbols which will help Bosch to identify special handling or special storage requirements
- 4.2 Suppliers should refer to Standard ASTM **D 5445 – 05** to comply with Bosch requirements. (See attached or click over icon) 

5. Bosch Packaging Data Sheet

Packaging proposal must be reflected as detailed and accurate as required in the “Bosch Packaging Data Sheet” attached in these guide lines.

PDS should be filled out completely:

Bosch Packaging Data Sheet. (See attached or click over icon) 



 BOSCH Invented for life																																									
SUPPLIER NAME		SUPPLIER ADDRESS																																							
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1. Bosch authorization does not exempt the supplier from their responsibility to deliver parts free of damage or corrosion. 2. Please refer to Bosch NA Packaging-Labeling Standards. 3. File size needs to be less than 2mb. Photos should be compressed. 4. Supplier must submit a separate *.pdf file of shipping and parts ID labels.																																									

The approval by Bosch of the packaging does in no way relieve the suppliers of their responsibility for part integrity, regardless of the INCOTERMS.

