

COBASYS

**Supplier
Packaging/Labeling
Standards**

Supplier Packaging/Labeling Standards

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All prior editions are obsolete and should not be used.

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1.0 Introduction

- 1.1 Purpose:** To clearly define packaging and labeling requirements to Cobasys suppliers.
- 1.2 Scope:** This standard applies to direct material items shipped to Cobasys North American facilities. It applies to all suppliers including other SB LiMotive plants.
- 1.3 Partnership:** Packaging development requires partnership. It can only function as intended when both supplier and customer work together from proposal through implementation. And then, it is absolutely crucial that both parties adhere to authorized packaging. The key is open, two-way communication.
- 1.4 Delivery Performance Rating:** A supplier's conformance to this standard and adherence to authorized packaging is factored into the supplier's "Delivery Performance Rating."

2.0 Supplier Responsibility

2.1 General Statements:

- 2.1.1 The supplier is responsible for the packaging of direct materials to assure their proper condition and quality upon delivery to Cobasys. **Parts must arrive at Cobasys without damage, rust/corrosion, or contamination.** Packaging shall be defined and agreed upon prior to the first production direct material shipment to Cobasys.
- 2.1.2 **Although packaging authorization is required, such authorization does not relieve the supplier of their responsibility to ensure adequate packaging for proper delivery of parts to Cobasys.**
- 2.1.3 Packaging shall not be a source of contamination. Barrier materials, (e.g. plastic bags), may be required. The supplier shall be responsible to wash and clean returnable packaging when necessary and should include these as part of the costs during packaging quoting.
- 2.1.4 Packaging is part of the supplier manufacturing process and shall be included as appropriate in the supplier's FMEA, Quality Plan, Source Release Plan, PPAP when these "tools" are used.
- 2.1.5 Standard Packaging - Each supplier shall utilize a single size container, package, and/or pallet containing a standard quantity for each part number supplied. This requirement shall be valid for expendable and returnable packaging.
- 2.1.6 The supplier is responsible for completing and submitting the Cobasys Packaging Data Sheet to the appropriate Cobasys packaging representative. The supplier can contact their supplier quality engineer to obtain the appropriate packaging representative.
- 2.2 Submit Proposal:** All packaging "modifications" or "new" proposals require authorization.
- 2.3 Laboratory simulation testing** may be required and should be considered by the supplier to assure that the product and packaging will withstand "real-world" load conditions, handling, and any applicable transportation modes that may become necessary. If testing is required, contact your Cobasys packaging representative. ?
- 2.4 A sample shipment** may be required to test and prove that the packaging withstands delivery conditions and to allow Cobasys to review the packaging. (See section 4.0)
- 2.5 Returnable packaging** shall be used when it is cost effective or when it is needed to meet specific Cobasys 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.

2.6 Returnable packaging expectations is Cobasys expects suppliers to proactively support and participate in actions to assure that the following conditions always exist when returnable packaging is utilized:

1. The supplier uses the shipping pack as authorized. This pack has been designed to meet the requirements set forth in this document.
2. Management of returnables and transportation logistics are performed in the most cost effective method compatible with delivery requirements.
3. An established minimum number of containers are available at the supplier's location when they are needed.
4. The supplier shall have authorized back-up packaging available. The internal dimensions and quantity of parts in the back-up packaging shall be the same as the authorized returnable packaging. The external dimensions shall not exceed the dimensions of the returnable packaging. Whenever back-up packaging is used, Cobasys shall be notified prior to shipping with an explanation.
5. Parts must arrive at Cobasys without damage, ESD (electrostatic Discharge) failure, rust/corrosion, or contamination, .
6. Cobasys owned packaging shall not be used for storage and shipment of non-Cobasys owned parts.

In addition, suppliers are expected to notify Cobasys immediately in the event that containers are returned to the supplier:

1. With supplied direct materials (parts) inside,
2. Not properly identified (e.g. incorrect address),
3. Without the full complement of returnable packaging components in the correct proportions (e.g. no lids, or more lids than totes),
4. With trash or other foreign materials inside,
5. Not properly prepared for safe transport (e.g. totes are banded or stretch wrapped to the pallet versus being stacked loosely),
6. At a lower return rate than full packs being shipped to Cobasys.

3.0 Packaging Alternatives and Requirements

3.1 Alternatives:

- a. Returnables using AIAG bulk containers, pallets, and totes that cube-out on AIAG standard footprint sized pallets (45" x 48" , 30" x 36", or 30" x 32") (*Preferred Method*)
- b. Expendable
- c. Expendable/Returnable Combination

3.2 Requirements:

3.2.1 Pallet-Load Dimensions: (Expendable or Returnable)

	<u>Face</u>	x	<u>Depth</u>		<u>Height, maximum</u>
+ Footprint Size:	48" (1150mm)	x	45" (1220mm)	AIAG Standard	51" (1295mm)
(pallet)	32" (760mm)	x	30" (820mm)	AIAG Standard	40" (1016mm)
	36" (914mm)	x	30" (820mm)	AIAG Standard	40" (1016mm)
	1200mm	x	1000mm	European Standard	1000mm
	1200mm	x	800mm	European Standard	1000mm
	44" (1120mm)	x	36"(915mm)	Cobasys European Standard	40"(1016mm)

- + Height Restriction: Includes pallet
- + No material shall extend over the pallet edge.

Note: European pallets or other pallet sizes require specific plant approval.

3.2.2 *Strapping Options:* (Cobasys prefers polyester strapping material that is friction welded rather than secured with a metal clip)

- + Non-Metallic Strap (Do NOT use metal banding)
- + Stretch Wrap or Shrink Wrap
- + Tape
- + Special "Seat Belt" Pallets (must be approved)

3.2.3 *Corner Boards:*

As required to protect the pack. Fiberboard is preferred.

3.2.4 *Corrugated Specifications:*

Corrugated (paper fiber board) packaging material must have strength to adequately withstand transportation and handling rigors from the supplier's shipping dock to Cobasys receiving dock.

Corrugated packaging shall be of adequate strength to support multiple stacking of unit pallet loads. Corrugated material must have adequate ECT (Ed Crush Test) or burst test strength to protect the product.

- + Corrugated packaging shall not utilize metal staples.
- + If stacking exceptions are required, label accordingly: "DO NOT STACK, STACK ONLY 2 HIGH," etc.

3.2.5 *Weight Limitation:*

- + Max. Shipping Pack = 2,000 Lbs. (909 Kg) or as uniquely specified (may be plant specific)
- + Max. Sub Pack < 30 Lbs. (13.6 Kg)

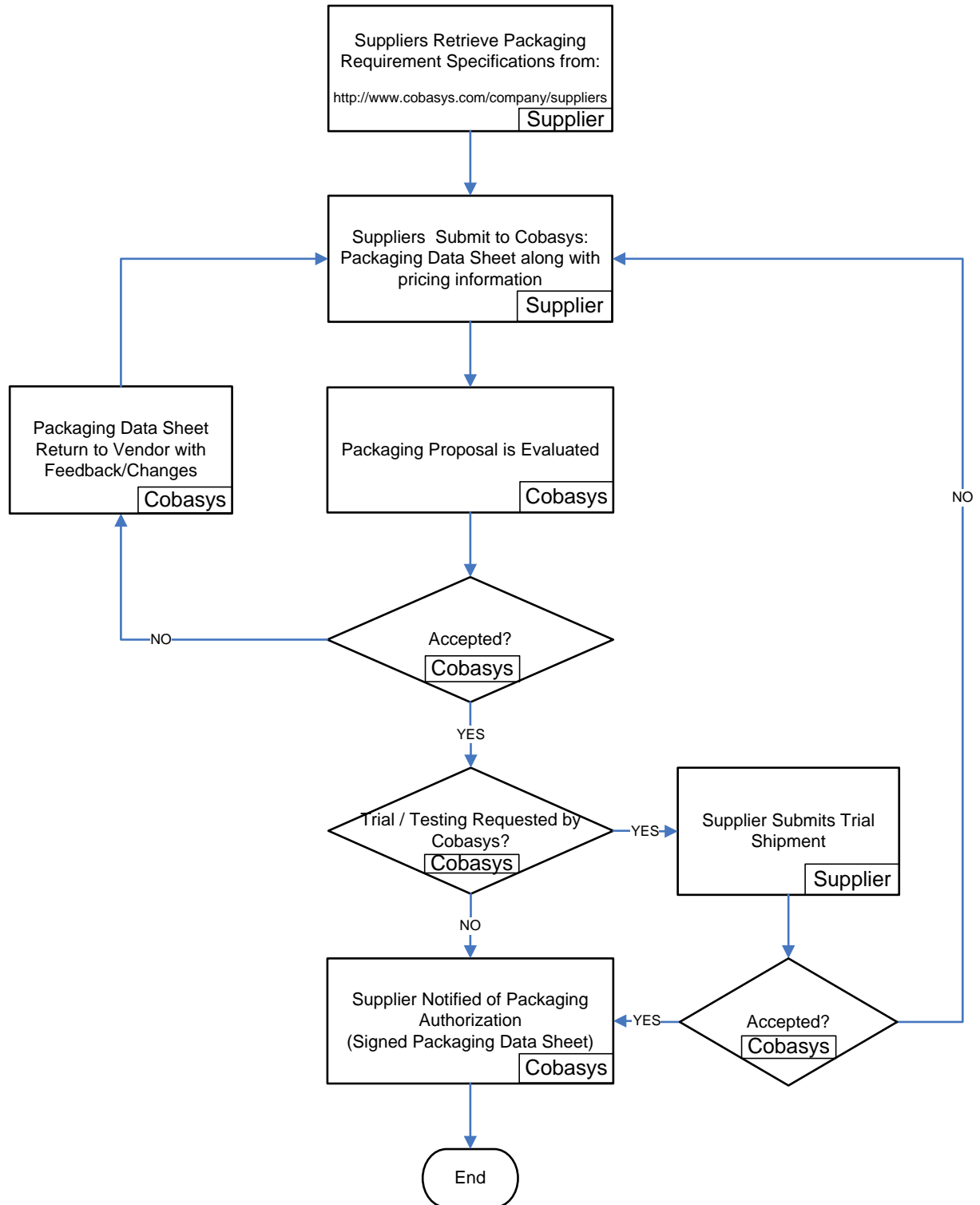
3.2.6 *Pallet Style/Type:*

- + Wood
 - All wood pallets shall conform to the National Wood Pallet Container Association Voluntary Standard for Wood pallets (NWPCA).
 - Cobasys prefers stringer, double deck, non reversible, wood pallets. Stringers for wooden pallets shall have a minimum height of 3½".
- + All pallets shall be 4-way entry.
- + Pallets shall be capable of being conveyed on standard gravity or powered roller conveyor.

3.2.7 *Imports* into the U.S. utilizing wooden packaging shall be free of bark and pests and according to U.S. regulations. See Internet site for the most current regulations:
<http://www.aphis.usda.gov/>

3.2.8 *Smallest packaging unit(s) such as plastic bags* may be considered to package parts inside totes, cartons, and/or bulk containers. However, when bags are used, they shall be marked with the Cobasys part number, quantity, and lot number or as uniquely specified. This label also requires bar code 39 (unless otherwise specified by a particular Cobasys facility).

4.0 Packaging Authorization Flow Chart



5.0 Labeling Requirements

5.1 Introduction

The quality of the information on labels is essential. Bar code labels are required and used to eliminate opportunity for error. Errors made because of label deficiency are serious in nature. (Bar code print quality must pass verification per ANSI guidelines.)

Suppliers shall not include information relating to quality on shipping identification labels. The supplier shall not apply adhesive-backed color tags to any of the required labels described herein.

Identification certification of stock will require a separate label applied near the bar code label.

5.1.1 AIAG Compliance:

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.

For a copy or additional information contact the Automotive Industry Action Group at (248)-358-3003, 26200 Lahser Road, Suite 200, Southfield, Michigan 48034-7100, or their web site: <http://www.aiag.org/>

Excerpts of AIAG-B-10 are included herein. Areas of the label not specified in AIAG-B-10, left to Cobasys option, are denoted by (*). In case of conflict, Cobasys Supplier Labeling Requirements take precedence.

Odette (VDA) – German Automotive standard
Compliance:
For Odette labels, see Section 5.6

5.1.2 General Label Specifications:

- + **Label Size (AIAG):**
4.0 inches (102mm) high by 6.0 inches (152mm) or 6.5 inches (165mm) wide (refer to Exhibit 1).
- + **Label Quantity and Placement:**
Minimum 2 labels per Shipping Pack on 2 different sides. (unless otherwise specified by a particular Cobasys packaging representative)
- + **Label Color:**
White in color with black printing.
- + **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 is not preferred on returnable packaging.
- + **Returnable Packaging:**
Card holders are recommended to contain and protect labels in conjunction with returnable packaging. Adhesive-backed labels shall be applied directly to placards or to stretch/shrink wrap. 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.
- + **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/>.
- + **Human Readable Zeroes (0)**
Show human readable zeroes (0) with a diagonal slash to differentiate them from alphabetic Os.

5.2 Shipping/Parts I.D. Label

5.2.1 Data Area and Titles (per AIAG B-10)

AIAG Standard Data: (Four data areas required by AIAG-B-10)

- + Part Number
- + Quantity
- + Supplier Number
- + Serial Number

AIAG Special Data Area:

Cobasys requires suppliers to provide 6 additional data areas within the portion of the label designated by AIAG-B-10

as the "Special Data Area". These fields are:

1. Description
2. Cobasys Purchase Order Number
3. Cobasys Revision Level Designator
4. Production Date - for materials which have a shelf life, provide both the production date and expiration date. Individual container/packages within a multi-pack carton shall also be labeled with the expiration date.
5. Lot Number
6. Supplier Name and Address

Exhibit 1 – Shipping/Parts I.D. Label Dimensions (not to scale)

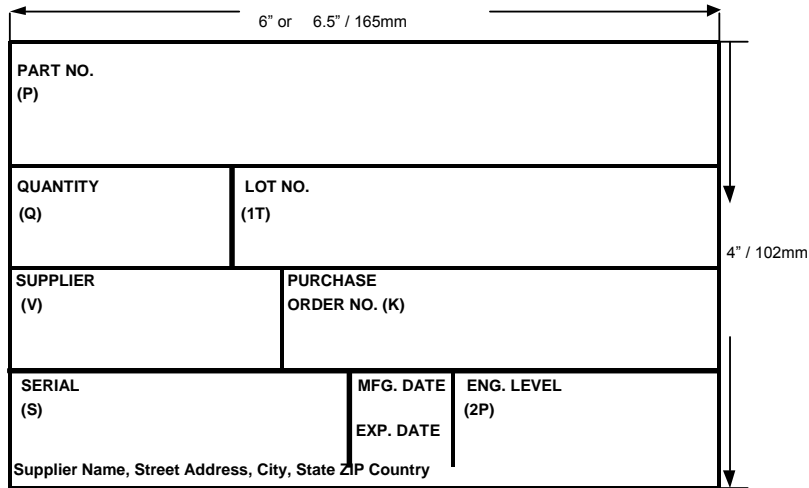


Exhibit 2 – Sample Shipping/parts I.D. Label (not to scale)



Exhibit 3 – Label Data Table

The following table defines the 10 required data areas:

DATA AREA NAME ¹	DESCRIPTION	HUMAN READABLE CHARACTERS HEIGHT	BAR CODE HEIGHT	DATA IDENTIFIER	COMMENTS
Part Number (Part No.)	Cobasys Designated Part Number	.4-.5 in. (10-13mm)	.5 in. (13mm)	P	
Quantity	Part Quantity	.5 in. (13mm)	5 in. (13mm)	Q	
* 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!	.4-.5 in. (10-13mm)	.5 in. (13mm)	1T	US and recommended for foreign suppliers.
Supplier Code (Supplier)	Cobasys Designated Supplier Code	.25 in. (6.5mm)	.4 in. (10mm)	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. (6.5mm)	.4 in. (10mm)	S 4S 5S	Use data identifier 4S on Master Labels. Use data identifier 5S on Mixed Load Labels.)
* Description & Supplier Part Number (Description)	Common name of item. Supplier part number is optional but must not be in bar code symbology.	.25-.5 in. (6.5-13mm)	N/A	N/A	Locate description above supplier part number.
* Cobasys Purchase Order Number (P.O. No.)	Cobasys designated purchase order number	.19-.25 in. (4.8-6.5mm)	.4 in. (10mm)	K	
* Cobasys Part Revision Level Designator (Eng. Level)	Cobasys part revision level designator as printed on Cobasys part print	.19-.25 in. (4.8-6.5mm)	.4 in. (10mm)	2P	
* Manufacturing and Expiration Date	Manufacturing date of parts in pack. Include Expiration date if item has a shelf life.	.2 in. (5mm)	N/A	D	MM-DD-YY Format (e.g. 09-30-04)
* Supplier Name	Supplier's name & address	.125 in. (3mm)	N/A	N/A	

¹ Acceptable abbreviations are shown in column 1 within parenthesis.

* Areas of the label not specified in AIAG-B-3, left to Cobasys option

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)

Individual packs (sub-packs) shall have an AIAG label on each pack as per Exhibit 1.

A unique serial number must be placed on the master label. The data identifier 4S must be used on master labels.

When a master label is used, serial numbers on individual sub packs may be optional (obtain approval if serial numbers are not included on sub pack labels).

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

Exhibit 4 - "Sample" Master Label for Common Items Packs (not to scale)

MASTER LABEL

PART NO. (P)	0204212030BKC15	LEFT HAND ABS CABLE BRACKET
		
QUANTITY (Q)	99999	LOT NO. (1T) 1234567890
 		
SUPPLIER (V)	49810A	PURCHASE ORDER NO. (K) 5500004190
 		
SERIAL (S)	123456789	MFG. DATE 10-17-02 EXP. DATE 10-19-02 ENG. LEVEL (2P) 12
 		
Supplier Name, Street Address, City, State Zip Country		

5.3 Mixed Load Label

Mixed item packs are only permitted in conjunction with a mixed load label. The different part numbers within the mixed item pack must be separated and contained inside sub packs. Each sub pack must be individually labeled with at least one shipping/parts I.D. label or master label if applicable.

Exhibit 5 – Label Data Table

DATA AREA NAME	DESCRIPTION HUMAN READABLE	CHARACTERS HEIGHT	BAR CODE HEIGHT	DATA IDENTIFIER	COMMENTS
Supplier Code (Supplier)	Cobasys 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.

Exhibit 6 - "Sample" Mixed Load Label for Mixed Item Packs (not to scale)

5.4 Label location



Shipping/Parts I.D. Label:

A minimum of two shipping/parts identification labels shall be placed on each shipping pack on adjacent sides (wraparound label is acceptable).

Master Label or Mixed Load Label:

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.

5.5 Address Label

In addition to the AIAG shipping/parts I.D. label or master label, include 2 address labels on the outer shipping pack.

- + Place these labels near the parts I.D. label, where possible, on adjacent sides.
- + Include address and dock designation as per Cobasys Purchasing documentation.
- + Include the invoice number in human readable and in bar code format. Cobasys requires invoice numbers to be 10 or fewer characters in length.

Exhibit 7 - Label Data Table (not to scale)

DATA AREA NAME	DESCRIPTION	HUMAN READABL CHARACTER HEIGHT	BAR CODE HEIGHT	DATA IDENTIFIER	COMMENTS
Address	Company, Street, City, State, Zip Code	.5 in. (Typ) (13mm)	N/A	N/A	As specified in Purchase Order
Dock and/or Bldg. No.*	Specifies dock at multi-dock facility	.313 in (Typ) (7.9mm)	N/A	N/A	As specified by Cobasys
SID No. (US) Or Lieferschein No. (Europe)	Shipping Identification Number	.5 in. (Typ) (13mm)	.5 in. (Typ) (13mm)	2S	The SID Number may be or is the Invoice Number.

Exhibit 8- Sample Address Label (not to Scale)

* Shipping address as specified in the Purchase Order.

From:
BOSCH CORPORATION
1234 MAIN STREET
HOMETOWN, SC 29777

TO:
COBASYS PH# 937-743-1001
50 OVONIC WAY
SPRINGBORO, OH 45066

ATTN: _____
P.O. _____

5.6 Odette, Euro-Supplier Labeling Option






Cobasys recognizes the European automotive industry approved Odette transport label for the identification of packaging and container contents for suppliers located in Europe. (However, Cobasys 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 durable packaging, or can be held in integral document holders on the container, if provided. Cobasys-AN 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.

Exhibit 9 – Foreign (Odette) Label Sample (not to scale)

RECEIVER BOSCH, USA		DOCK / GATE CHARLESTON ABS	
(N) Delivery Note No 2595160 		SUPPLIER ADD. CH-9435 HEERBRUGG, SWITZ.	
		NET WT (KG) 125 KG	GROSS WT (KG)
		NO. BOXES 1	
(P) PART NO. 5996820000 			
(R) QUANTITY 100 		DESCRIPTION LUBRICANT	
		SUPPLIER PART NO. 3530871	
(V) SUPPLIER 910276 		(2P) REVISION 4 	
		PROD. DATE 07-28-97	EXP. DATE 07-28-02
		HAZZARD CODE 	
(S) SERIAL 12454 		LOT NO. 	

6.0 Contacts

Contacts/Responsibility: Can be obtained through Cobasys Purchasing or Supplier Quality Engineering.

7.0 Terms & Definitions

Address Label

Label to denote shipping address. (See section 5.5)

Data Identifier

The first character(s) of a bar code.

Direct Material

Material that becomes part of the finished product during manufacturing processes at Cobasys. (See section 1.2)

Master Label

A label used to identify and summarize the contents of a multiple pack of same part number. (See section 5.2.2)

Mixed Item Pack

A pack containing items with different part numbers from the same supplier. (See section 5.3)

Pack or Package

A device which provides component protection, containment, ease of use, and information.

Shipping Pack or Pallet Load

A package used for shipping items from the supplier's facility to a Cobasys facility. It's description includes all the packaging materials that are used. It may be returnable or expendable.

Shipping/Parts Identification Label (AIAG or Odette Label)

A bar coded label used to identify the contents of a shipping pack and sub pack.

Sub Pack

The lowest level of packaging that contains the part, e.g. plastic bag, carton, tote, et al.

Wraparound Label

Consists of continuous label stock on which two labels are printed side by side designed to attach to adjacent sides of a carton or pallet box.

The following instructions will assist in properly filling out the Packaging Form. The form is an MS Excel file and can be obtained by contacting Cobasys supplier quality engineer. If the supplier provides more than one part a separate form must be submitted by the supplier.

The completed form must be submitted electronically / e-mail to the designated Cobasys supplier quality engineer.

Date: The date the form was completed and e-mailed to Cobasys by the supplier
 Part Number: The Cobasys part number (vendor p/n can be in parenthesis after Cobasys p/n)
 Part Description: A brief description of the part
 Supplier Name: Name of vendor
 Supplier Number: The vendor number assigned by Cobasys purchasing
 Supplier Pick Up Location: City and State of facilities part will be picked up for shipment/transit to Cobasys
 Packaging Contact: The person employed by the supplier that is responsible for overseeing the packaging requirements of the product supplied to Cobasys:
 Cobasys: This contact will also support any packaging activities / questions.
 Phone Number: The phone number of supplier Packaging Contact
 E-Mail Address: The e-mail address of supplier Packaging Contact
 Supplier Signature: The signature of supplier representative
 Date: Date when signature was signed

PKG DESIGN

DIGITAL DRAWING OR PHOTO

A digital picture or a CAD model/drawing of the following should be provided as appropriate for each pack:

- a. Part shown in pack operator direction
- b. Dunnage shown in pack operator direction
- c. Container with label location
- d. Pallet load (As shipped to Cobasys)

PKG MATERIALS

Description: The description of Dunnage component
 Manufacturer: The vendor responsible for manufacturing Dunnage Component
 Material: The material of the Dunnage Component
 Lead Time: Estimated lead time for implementing the dunnage
 RTP / EXP: Either (RTP) for Returnable packaging or (EXP) for Expendable
 Comments: Note any additional details concerning packaging materials

PKG DATA

COMPONENT SIZE

Part Size: The dimension of part Length, Width, Height in millimeters
 Container Size: The dimensions of individual container length, Width, Height in millimeters
 Pallet Only: The dimensions of Only the Pallet Length, Width, Height in millimeters
 Pallet Load As Shipped: The dimensions of the entire pallet with all containers in ready to ship condition. Length, Width, Height in millimeters.

COMPONENT WEIGHTS

Part: Individual part weight in (kg)
 Dunnage Tare: Weight (kg) of separators, cell trays, etc. (if required)
 Container Tare: Weight (kg) of cardboard box or returnable carton
 Pallet Tare: Weight (kg) of pallet
 Container Gross: Weight (kg) of individual container including parts and separators
 Pallet Load Gross: Weight (kg) of pallet including all containers, parts and separators

QUANTITIES

Quantity / Container: Number of individual parts per container
 Container / Layer: Number of containers per layer
 Layer / Pallet: Number of layers per pallet
 Total # of Parts / Pallet: Total number of parts per pallet

SUPPLIER PACKAGING FORM



FCD-00325-00
Supplier Packaging Fc