



**DEPARTMENT OF EXCISE, ENTERTAINMENT AND LUXURY TAX,
GOVERNMENT OF NCT, DELHI**

**Standard Operating Procedure
For
Distillery-Brewery-Winery**

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1. Introduction

Delhi Excise Department, Government of National Capital Territory of Delhi is using 'Excise Supply Chain Information Management System' (referred as ESCIMS throughout the document) in order to automate and regulate liquor sale in Delhi. The objective of ESCIMS is to make the system more transparent, efficient, effective and accountable with the help of Information & Communication Technology (ICT). The project covers the Excise services at Department and Corporations, Bonded Warehouses, Vends and Distilleries. The system prevents any leakage and provides real time information to the excise department. The system enables the department to track the source of the each bottle that is sold at the vends in Delhi.

ESCIMS works on GS1 compliant barcodes placed at case and bottle level. These barcodes are generated and printed on case/bottle by liquor manufacturing distillery as per the specifications recommended.

The objective of this document is to indicate relevant technology and process details for implementation of the bar code mechanism in the manufacturing process. It needs to be highlighted and understood by all stakeholders that if the bar code is not found readable due to transit damages, poor quality of printing, paper, pasting, etc., suitable penal action will be taken.

1.1 Objectives of ESCIMS

The Delhi Excise Department has envisaged to meet the following objectives through ESCIMS solution:

- To enforce and regulate liquor trade in Delhi without promoting it
- To mobilize revenue generation under the multiple heads of taxation that it administers.
- Track and Trace of each bottles and cases from Distillery to Bonded Warehouse and from Bonded Warehouse to Vends.

1.2 Benefits from ESCIMS

The benefits accrued by implementing the ESCIMS solution are:

- Reduction in smuggling and brand pushing of liquor which help in better revenue mobilization.
- Automation of the issue of transport permits, import permits, no objection certificates will obviate the necessity of people coming to department.
- Generation of timely, intelligent reports and comparisons will help managerial control, inventory management, and improved efficiency and enable revenue record reconciliation on daily basis. Also bringing departments float to zero simultaneously. This will also help flattening of tax cycle.
- Ease of tax rates or regulatory changes being put in force immediately and also providing transparency to department and its business with its clients.

1.3 Outcomes from ESCIMS

The outcomes of ESCIMS are:

- Assessment of Excise duty to be paid/ paid in real time
- Online MIS system for prompt and efficient decision making
- Online availability of Allocation, Sales and Payments related information
- Transport of Liquor within defined service levels
- Ease of payment of fees for Vend owner.
- An effective grievance redressal mechanism by providing a Helpline/ Call Center function with single seat in 2 shifts
- Online status tracking and enquiry facility

- Ensuring the genuine and correct amount of liquor reach the citizen.

1.4 Implementation Agency

Tata Consultancy Services (TCS) is the Implementation agency (IA) for ESCIMS. The IA is responsible for full system Integration of all Excise Department functional areas. Procurement, Installation and commissioning of hardware & software, application development, operation and maintenance support all comes under the scope of IA. **The scope excludes provision of infrastructure and application capabilities to distilleries.**

Thus the need to make distilleries ready for ESCIMS before it starts operating in Delhi.

1.5 Scope

The scope of this document is to detail down the distillery processes as per the project requirements.

- GS1 Registration
- Distillery Processes
- ESCIMS Implementation and Operation
- Responsibility
- Recommendation

Distillery Definition

The premises where distillation and/or packaging of alcohol are carried out are known as a distillery. Hence in our ESCIMS application, the premises where packaging of distilled alcohol (liquor or beer) is taken place are considered as distillery.

2. Distiller as Stakeholder

ESCIMS has automated and regulated the liquor sale in Delhi. The track of liquor entering in to Delhi starts from the premise of Distilleries. Thus distilleries have an important role to play in this endeavour.

2.1 Business Functions Covered

Following business functions are affected in using ESCIMS:

- Issue of License
- Issue of Import Permit
- Scheduling of production
- Packaging and Labelling
- Dispatch against Import Permit (IP)
- Payment of requisite fee and excise duty

2.2 Benefits for Distiller

Distillers are benefited from this system as:

- Distilleries can apply online for the license and track its status.
- With enhanced visibility of stock, distilleries can optimize the efforts for applying and getting the import permit. Further import permit can be applied and tracked on line. Delivery of IP can be obtained on electronic format both for distillery and respective state excise department at distilleries to facilitate the whole process.
- ESCIMS system maps to the distillery processes and supports its current functions from scheduling of production to the dispatch process.
- Better control over inventory is achieved.
- Supply of spurious liquor is reduced, protecting brand image and loss of revenue to the distiller.
- Reliability and efficiency in delivery is achieved.
- All payments of requisite fees and duties can be made online with proper tracking and controls.

2.3 Distillery Processes Overview

The processes that distiller should follow to fall in line with ESCIMS are briefly explained below:

- Request of barcode sequence number while scheduling of production for a batch/lot and download unique serial number of bottles and Excise Tracking Number (ETN) of cases for each SKUs/GTINs.
- Print and paste GS1 dual 2D Data Matrix bar-code on bottles/ mono case using the downloaded unique serial number for GTIN/SKU.
- Print and paste GS1- 128 linear barcode using downloaded Excise Tracking Number (ETN) for cases.
- Distillery will also print Serial Shipping Container Code (SSCC) on case label in human readable text and maintain against Excise Tracking Number.
- ESCIMS will provide both mapped and unmapped data as requested during licensing registration.

- In case of mapped data, ESCIMS provides the data where bottles barcodes are associated with the case barcodes, distillery will have to make sure not to mix bar codes while pasting them on bottles and cases.
- In case of unmapped data, ESCIMS provides data of case barcodes and bottle barcodes separately in XML format, distiller will have to make sure that they map the data at the time of packaging and record it in XML format as mentioned in Annexure IV along with manufacturing date, expiry date and batch number.
- In case of mapped data, distiller will provide manufacturing date, expiry date and batch number for a range of case barcodes.
- In case of unmapped data, distiller will upload mapped data as per XML format.
- In order to dispatch material from the distillery, download and print the IP on the stationery provided by excise.
- Excise Tracking Number (ETN – second barcode) of each case should be scanned while dispatching against a particular IP.
- Upload the cases scan data in XLS (mapped) or XML (unmapped) format on ESCIMS portal whenever liquor is dispatched from distillery to bonded warehouse for each truck against the particular IP.
- On successful upload of case ETN against Import permits, truck exit time will be captured by the ESCIMS and the delivery challan will be generated for printing.
- If any truck carries liquor of more than one import permit, distillery needs to upload data on ESCIMS portal import permit wise. Only one delivery challan will be issued against one truck for both the IPs.

3. ESCIMS Implementation and Operations

3.1 Prerequisites

To integrate distillery processes to meet the ESCIMS requirements, distilleries have to fulfil prerequisites.

3.1.1 GS1 Registration

- Most of the distilleries are registered with GS1 India and have got **Global Company Prefix (GCP)** from GS1. In case any distillery is not registered, the same must be registered to get the GCP.
- **GCP** must be shared with excise department at the time of license application by all distilleries.
- Respective brands/SKUs (bottle/cases) are also to be registered with GS1 to get GTIN.
- GTIN number is also to be provided to Excise department at the time of license registration.

Note: In ESCIMS, cases will be tracked and traced across supply chain from Distillery to the end point in vends, therefore, GTIN will be assigned to each cases and registered with GS1. Case GTIN will be given at time of downloading barcodes for an SKU or brand from ESCIMS.

A detail of GS1 Barcode Standards for bottles and cases is provided at **Annexure-I** for ready reference in **Appendix**.

3.2 Distillery Activities

3.2.1 Scheduling for Batch/Lot (Request for Barcode Sequence Number)

Distiller will request barcode sequence numbers from ESCIMS while scheduling the production for a batch/lot.

Distiller will select the products or brands already registered in ESCIMS and enter quantities of cases schedule for manufacturing, ESCIMS will provide bar code number for bottles and cases as per details provided earlier at the time of brand registration. As per the user preference (selected at the time of licencing) the data is provided either in mapped or unmapped format.

Mapped data means the bottle barcodes are associated to particular case barcodes. An excel file containing bottle barcode, case GTIN and Excise Tracking Number (ETN) is provided to the distiller.

Unmapped data means that the bottle and case barcodes are provided separately in XML format and association of case and bottles mapping has to be done by the distiller at the time of packaging during manufacturing.

Distiller will generate printed barcodes from the data provided after entering the batch number, manufacturing date and expiry date. Also, Serial Shipping Container Code (SSCC) will also be printed in human readable text on each case label. Distillery may map case SSCC with Excise Tracking Number (ETN).

Generate Barcode Sequence Numbers

Generation Type:

S.No.	Brand Name	Size(ml)	Pack Size	Quantity (in Cases)
1	<input type="text" value="HULCHAL"/>	<input type="text" value="180"/>	50	<input type="text" value="50"/>

Figure 1: Generate Barcode Sequence Numbers

Generate Barcode Sequence Numbers

Generation Type:

S.No.	Brand Name	Size(ml)	Pack Size	Quantity (in Cases)	Case Range	Bottle Range	Download File
1	HULCHAL	180	50	50	0000000514-0000001009	0000002501-0000005000	Download

Figure 2: Generate Barcode Sequence Numbers (Download file)

3.2.2 Barcode printing and pasting (Provide Barcode details)

The barcodes thus generated as explained in the previous section are to be pasted on the bottles and cases at the time of packaging.

Barcode printing and pasting can be done in two ways depending on the level of automation in the distillery – offline and online.

Offline printing – In this case the barcode labels are printed, using the mapped data (preferably), on the specially cut sheets (the sheet length depending on the pack size of the case) with case barcodes on the top and bottle barcodes underneath. These barcodes are then carefully pasted on the bottles and cases, keeping the mapping intact.

The manufacturing date, expiry date and batch number of the case ETNs used in printing and pasting must be updated on ESCIMS using ‘Provide Barcode Details’ functionality.

Online printing – In this case the barcode labels are printed on the production line (or pasted on-line using stackers) using unmapped data. The barcodes thus printed must be mapped using suitable mechanism and a XML file should be generated, in the specified format, for uploading in ESCIMS.

The XML file thus generated must be uploaded on ESCIMS using ‘Provide Barcode Details’ functionality.

Provide Barcode Details

Select Brand And Size of Generated Barcode

Brand Name: Size(ml):

Fields marked with (*) are mandatory.

S.No.	From Range	To Range	Provide No of Cases *	Calculated To Range	Batch Number *	Manufacturing Date *	Expiry Date	Select *
1	<input type="text" value="51"/>	<input type="text" value="100"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 3: Provide Barcode Details (mapped data)

Select Brand And Size of Generated Barcode

Brand Name * Size(ml) *

S.No.	Brand Name	Size(ml)	Pack Size	scm.unmappedbarcode Sequence.quantityCases
1	TEACHER OR BL SC WHISKY	750	12	3298

S.No.	scm.unmappedbarcode Sequence.uploadFile	scm.unmappedbarcode Sequence.fileName	scm.unmappedbarcode Sequence.status
1	<input type="button" value="Browse..."/> <input type="button" value="Upload"/>	133659_519_k.xml	Success
2	<input type="button" value="Browse..."/> <input type="button" value="Upload"/>		

Figure 4: Provide Barcode Details (unmapped data)

Note 1:

Downloaded requested barcode sequence numbers will be purged in 6 months from ESCIMS.

3.2.3 Dispatching against Import Permit

At the time of dispatch, each case (ETN – second barcode) will be scanned using hand held scanner to capture the case data in an excel file. All cases against one IP are to be included in a single file.

The scanned data (in excel format) of cases against particular IP will be uploaded after selecting the particular import permit in ESCIMS after login. During uploading, ESCIMS will validate uploaded scanned cases barcode details using pre-mapped or mapped data. Also ESCIMS will perform other validation likes GTINs, Number of cases and bottles, pack size, unique number etc. Any failed validation will be immediately notified by the system.

Details of truck and its driver will also have to be entered during the process.

After successful validation, truck exit time will be captured. Distiller will print the delivery challan from ESCIMS to complete the dispatch process.

If two IPs are selected for dispatch in one truck then one delivery challan will be generated for both IPs and distillery needs to upload data on ESCIMS portal import permit wise.

Information about the dispatch against a particular IP will be immediately available to Bonded Warehouse for receiving of stocks against import permit shown as **“Dispatched from distillery”** in ESCIMS.

Dispatch Against Import Permit

Search				
Import Permit Number	<input type="text"/>	Search	Validity Date (DD/MM/YYYY)	<input type="text"/>
S.No.	Import Permit Number	Number of Cases	IP Expiry Date	Select
1	IPN230713014518	270	31/03/2014	<input type="checkbox"/>
2	IPN240713014527	100	28/07/2013	<input type="checkbox"/>

Figure 5: Select import permit for dispatch

Dispatch Against Import Permit

Import Permit No.	IPN120713014505	Export Pass No. *	<input type="text"/>	Export Pass Issued On *	<input type="text"/>
Route	BEHROR-GURGAON-DELHI	Exit Date & Time	<input type="text"/>	& <input type="text"/> : <input type="text"/> AM	
Truck Reg. No. *	<input type="text"/>	Transport Name *	<input type="text"/>	Driver Name *	<input type="text"/>
Drivers Phone No. *	<input type="text"/>	Ledger Balance	0		
IPN120713014505		Upload Dispatch Detail *	<input type="text"/>	<input type="button" value="Browse..."/>	<input type="button" value="Upload"/>

S.No.	Import Permit No.	Brand Name	Size(ml)	Number of Cases	Number of Cases Uploaded	Barcode Fee Applicable
1	IPN120713014505	TEACHER OR BL SC WHISKY	750	100		
2	IPN120713014505	TEACHER 50 SCOTCH WHISKY	375	100		

Figure 6: Upload case details against import permit

Data saved successfully. Please print the delivery challan.

Dispatch Against Import Permit

Import Permit No.	IPN120713014505	Export Pass No. *	UP123	Export Pass Issued On *	12/07/2013
Route	BEHROR-GURGAON-DELHI	Exit Date & Time	12/07/2013	& 2 : 21 PM	
Truck Reg. No. *	UP1233444	Transport Name *	JKM	Driver Name *	TARUN
Drivers Phone No. *	9895656232	Ledger Balance	1.00		
IPN120713014505		Upload Dispatch Detail *	<input type="text"/>	<input type="button" value="Browse..."/>	<input type="button" value="Upload"/>

S.No.	Import Permit No.	Brand Name	Size(ml)	Number of Cases	Number of Cases Uploaded	Barcode Fee Applicable
1	IPN120713014505	TEACHER OR BL SC WHISKY	750	100	100	219.10
2	IPN120713014505	TEACHER 50 SCOTCH WHISKY	375	100	100	421.35

[Print Delivery Challan Details](#)

Figure 7: Print Delivery Challan

4. Responsibility

The responsibilities of developing applications in order to perform distillery activities and achieve ESCIMS objectives are listed below:

S. No.	Distillery Activities	Responsibility	Application
1.	Global Company Prefix Registration with GS1	Distiller	NA
2.	Registration of each SKUs and Cases (GTINs)	Distiller	NA
3.	Distiller will provide bottle and case mapping at the time of license registration	Distiller	ESCIMS
4.	Raise demand order request	Bonded Warehouse on behalf of Distiller	ESCIMS
5.	Payment of Import Fees	Distiller	ESCIMS
6.	Import permit availability to distiller	Excise	ESCIMS
7.	Distiller will register method for Offline and Online during license registration	Distiller	ESCIMS
8.	Request of Barcode Sequence Number	Distiller	ESCIMS
9.	Printing of barcode on bottles and cases as per downloaded barcode sequence number	Distiller	Distiller Application
10.	Pasting of barcode labels on bottles and cases	Distiller	Distiller Application
11.	Mapping of bottles and case for Online Method	Distiller	Distiller Application
12.	Provide barcode details	Distiller	ESCIMS
13.	Cases details as per Excel format Import Permit wise	Distiller	Distiller Application
14.	Distiller will upload cases details during dispatch against Import Permit	Distiller	ESCIMS
15.	Distiller will print Delivery Challan	Distiller	ESCIMS

5. Recommendation

Below are the recommendation based on the interactions, site visits and requirements of the project as specified.

- Distillery must be registered with GS1 and register their SKUs with GS1 at the earliest.
- Each distiller should study and analyse their current process and adopt the new system in a manner that suits their manufacturing process.
- Each distiller should undertake a pilot for its manufacturing unit, assembly line so that the outcome may be in line with desired objectives.
- Distillers should ensure that 1D or 2D barcode label is not defaced. Regulatory requirements are not stamped or printed over barcode label.
- In case of damages before dispatch from distillery, as per the current practice, the distiller re-packs before dispatching. Distiller is expected to rescan the re-packed cases/bottles and update the database to finally upload an updated data.
- The process of excel or XML creation (through distillery application) should be tested and followed as advised so as to avoid any mismatches of data about bottle/cases in the supply chain.
- The case quality should be improved to avoid re-packaging instances in view of transit damages, besides handling of cases has to be improved.

Annexure I – Bill of Material

S. No.	Hardware	Descriptions
1.	Desktops with Internet Broadband Connection	Standard configuration of 2GB to 4 GB RAM, above 500GB Hard disk and latest Anti-Virus software and requisite application to store data and create excel or XML for upload to ESCIMS using Broadband Internet Connection.
2.	HHT	Scanning of 1D and 2D barcodes, generation of excel/xml files
3.	Printer	Printing of 1D and 2D barcodes
4.	Barcode Labels	For printing 1D and 2D Barcodes on barcode labels Detailed Specifications is provided in Annexure V for Tamper Evident Labels Detailed Specifications is provided in Annexure III for barcode labels dimension.

Annexure II – GS1 Barcode Standards for Bottles and Cases

GS1 standards in general provide interoperability, flexibility and vendor independence which in turn result in reduction in end product costs to businesses and consumers. These widely implemented standards enable unique and universal identification of products, assets, services, entities/locations, data capture and seamless sharing of supply chain information between trading partners including manufacturers/ suppliers, retailers and consumers. Flow of physical supplies and data sharing/querying also becomes faster, more accurate and seamless across multiple trading partners in supply chains.

GS1 standards works on Identifiers, these identifiers combines with automatic identification technologies like Bar-Codes to establish a connection between the physical entities involved in a supply chain and their related information.

Broadly, there are two types of identifiers:

1. GS1 Identification key, For e.g. GTIN, Batch #, Mfg. Date, Unique Serial #,
2. GS1 Application Identifier, For e.g. (01) for GTIN, (10) Batch #, (11) Mfg. Date, (21) Unique Serial #

Based on the symbol used to encode data, GS1 bar-codes can be categorized into two broad categories:

1. GS1 barcodes with 1D/linear symbols which include:

- European Article Number (EAN) /Universal Product Code (UPC)
- GS1 DataBar
- GS1-128
- Interleaved 2 of 5" (the Barcode Symbology used) and 14 digits (the length of the container symbol (ITF-14)

2. GS1 BarCodes with 2D symbols which include:

- GS1 DataMatrix
- GS1 composite component

As per project requirement, **1D GS1 128 barcode symbology** shall be used at case level and **2D GS1 Data matrix symbology** shall be used at Bottle level/Mono Case.

Data Structure

GTIN 14 Data Structure

Extension Digit	Company Prefix ----->						Item Reference <-----						Check Digit
N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13	N14

Company Prefix consists of **Country Code and Company Code** registered with GS1.

Country Code is “890” for company registered with GS1 India office.

Company Prefix varies from 7 digits to 10 digits and is based on number of SKUs registration.

For 100 SKUs, Company Prefix is 10 digits. Company Code will be of 7 digits.

For 1000 SKUs, Company Prefix is 9 digits. Company Code will be of 6 digits.

For 10000 SKUs, Company Prefix is 8 digits. Company Code will be of 5 digits.

For 1,00,000 SKUs, Company Prefix is 7 digits. Company Code will be of 4 digits.

Extension Digit – It will be zero for bottle since bottle is at primary level. When this bottle packs into case the extension digit will become 1 for case.

Check Digit – A modulo-10 number calculated across the preceding digits to ensure data integrity

Excise Tracking Number (ETN) Data Structure

Application identifier	Excise Tracking Number																	
90	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13	N14	N15	N16	N17	N18

Application identifier (90) indicates the data field contains an internal tracking number agreed upon by trading partner (excise in this case)

Excise Tracking Number is the 18 digit unique number provided by ESCIMS

SSCC (Serial Shipping Container Code) – The GS1 identification key used to identify individual logistic Unit. The key is comprised of an Extension digit, GS1 Company Prefix, Serial Reference, and Check Digit.

SSCC must be printed on case barcode as human readable text and this number must be maintained by the distiller.

SSCC Data structure

Application identifier	Extn Digit	Company Prefix ----->						Serial Reference <-----						Check Digit				
00	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13	N14	N15	N16	N17	N18

Application identifier (00) indicates the data field contains an SSCC.

Extension Digit is used to increase the capacity of Serial reference No. with SSCC. It ranges from 0-9.

GS1 Company Prefix A globally unique number assigned to a GS1 member company

Serial reference – A global unique Number assigned by company.

Check Digit A modulo-10 number calculated across the preceding digits to ensure data integrity.

Check Digit

Check Digit is computer check digit which makes sure barcode is correctly composed. This calculation is done by using Modulo 10 algorithm.

Here is how a mod10 check digit is calculated:

1. For this example, we will use a barcode containing the data 12345678912. Starting from the left side of the bar code, add together every other digit, ignoring the check digit. Add the first, third, fifth, seventh, ninth, and eleventh digits:

$$1+3+5+7+9+2=27$$

2. Multiply the result from step 1 by 3:

$$27*3=81$$

3. Add together the remaining digits. Add the second, fourth, sixth, eighth, tenth, and twelfth digits:

$$2+4+6+8+1=21$$

4. Add the results of steps 2 and 3:

$$81+21=102$$

5. Find the minimum number which, when added to the result from step 4, will generate a number that is evenly divisible by 10:

$$102 + n = 110$$
$$n = 8$$

The number 8 is the mod10 check digit for this arrangement of digits.

Annexure III – Barcode Specifications for Distillery

The quality of barcode implementation shall have an impact at various points of the supply chain in terms of readability of the barcode. It is important that barcode complies with GS1 standards and the technical specifications suggested in this section.

Case Barcode

Implementation Guidelines for GS1 -128 1D Barcode at Case Level

At case level, two barcodes following GS1 128 Barcode symbology shall be printed on a single label to be pasted on each case by the distiller.

- The first barcode will encode GS1 Case GTIN number, manufacturing date, best use before date and batch number.
- Variable length data strings should be encoded after fixed length data strings therefore sequence should be Case GTIN/Manufacturing Date/Best Before Date/Batch Number.
- If best before date (expiry date) is not applicable then it should not be encoded.

Case 1st Barcode Data Structure

Attribute	Description	Value	Size(N-numeric, AN-Alpha Numeric)
Application identifier	To Identify GTIN Number	01	N2
GTIN	Indicator + Company Prefix + Item Number+ Check Digit		N14
Application identifier	To identify Manufacturing Date field	11	N2
Manufacturing Date	Manufacturing Date of liquor	Date shall be in (YYMMDD) format	N6
Application identifier	To identify Best before date field	15	N2
Best before Date	Expiry date of liquor	Date shall be in (YYMMDD) format	N6
Application identifier	To identify Batch number	10	N2
Batch Number	A unique Number assigned by Distiller for a batch		AN7

This barcode will have GTIN number (a unique product code for case), manufacturing date, best before date and batch number.

AI	GTIN-14			AI	Manufacturing Date	AI	Best Before Date	AI	Batch Number
	Extension Digit (1 digit)	Company Prefix + Item Reference	Check Digit (1 digit)						
	Country								

	Code (3 digits)	Number(9 digits)							
01	0 890	155600000 6	11	131101	15	140331	10	60	

Case 2nd Barcode Data Structure

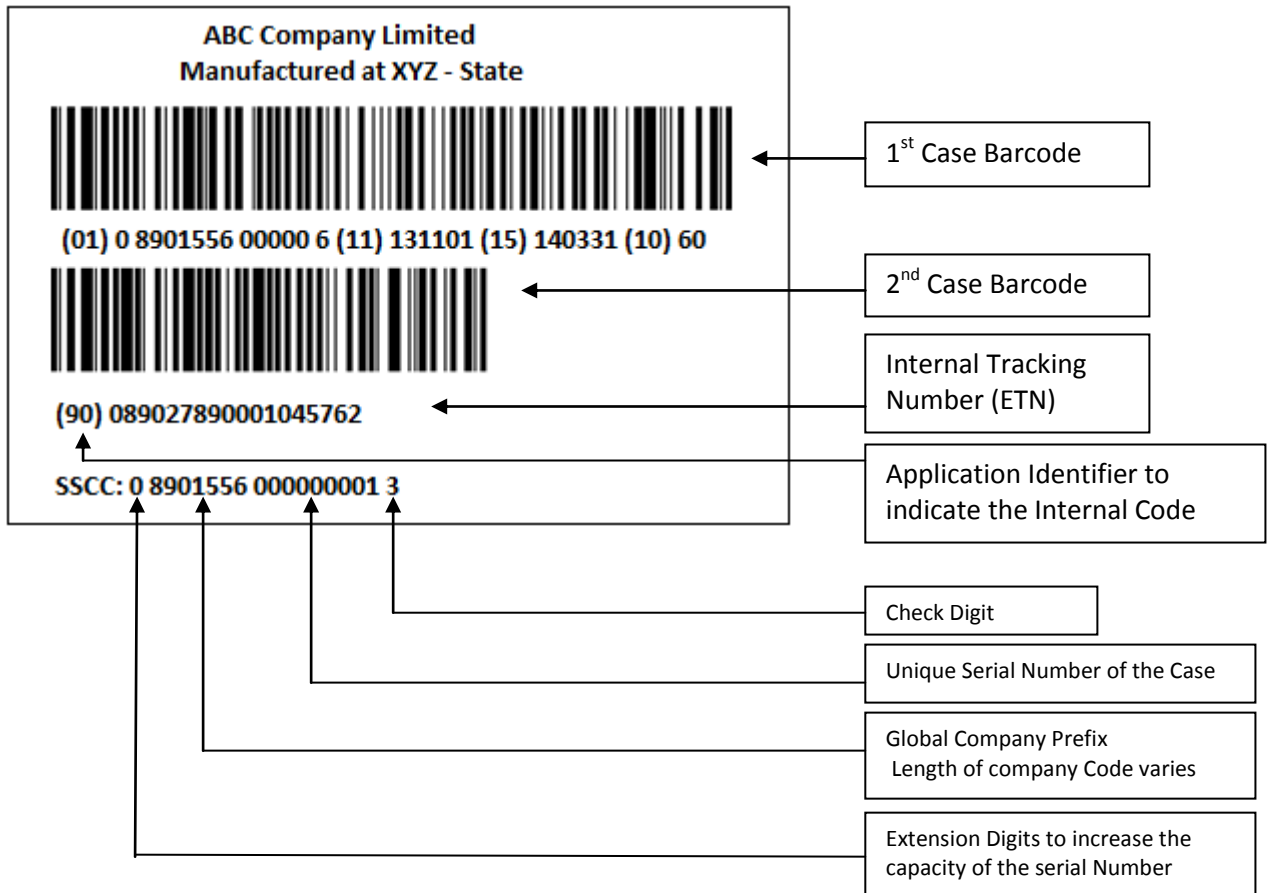
The second Barcode will encode unique serial number (ETN – Excise Tracking Number) of each case up to 18 Digits.

Attribute	Description	Value	Size(N-numeric, AN-Alpha Numeric)
Application identifier	To identify Data filed as SSCC	90	N2
ETN	Unique tracking number downloaded from ESCIMS		N18

Serial Shipping Container Code (SSCC) in Human Readable Text

Along with the 2 barcodes, SSCC number must also be written in human readable text only on the case label. No barcode image will be printed on case label for SSCC.

The final constitution of case label is as follows:



Case Barcode Dimensions

First Barcode

Mil Size: 10 Mils

Barcode Dimension – 2.85” (Length) x 0.40” (Width)

Read Distance – By Hand Held Terminal – 4” – 8”

Second Barcode

Mil Size: 15 Mils

Barcode Dimension – 2.27” (Length) x 0.40 (Width)

Read Distance - By Hand Held Terminal – 3” – 9.5”

Label Size – 4”(Length)x3”(Width) for both case barcodes and SSCC number (in human readable text) on one label

Note:

- All above information of first barcode (GTIN, Manufacturing Date, Best Before Date and Batch Number) and of second barcode SSCC will also be printed in human readable text as per the statutory requirements.
- Application identifiers will also be encoded in barcode image without brackets.
- If best before date is not applicable then it should not be encoded.
- If best before date is not encoded in generated barcode then it should not be printed in human readable text.
- SSCC need to be generated using the company prefix of the manufacturer and should be printed on the label in human readable format. It is recommended to map the SSCC with ETN in the application at distillery end. No image will be printed on case label for SSCC.
- **Paper Type – Temper Evident Label** - Water proof, self destructive, smudge proof.
- **Life of Ink printed by printer** – It should be 1 to 2 years. Thermal transfer printer or inkjet printers may be used for barcode printing. It is recommended to use Resin Ribbons for printing barcode.
- **Scanning on Low Visibility** – Both the images of case barcodes must be scannable and should work fine on the low visibility also.

Bottle Barcode

Implementation Guidelines for GS1 2D Data Matrix Barcode at Bottle Level/Mono Case or Small case (secondary packaging) of 60 ml bottles

At Bottle level/Mono Case, 2D GS1 Data matrix symbology shall be used and dual 2D image will be printed on bottle barcode label which will be encoded with bottle GTIN and unique serial number downloaded from ESCIMS.

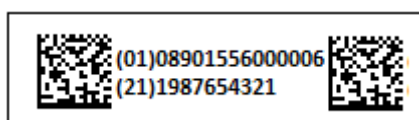
Attribute	Description	Value	Size(N-numeric, AN-Alpha Numeric)
Application identifier	To identify GTIN Number	01	N2
GTIN	Extension Digit + Company Prefix + Item Number+ check digit		N14
Application identifier	To identify unique serial number	21	N2

Serial number	Unique Serial Number downloaded from ESCIMS for GTIN/SKU		N10
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Bottle/Mono Case Barcode Examples

Application Identifier Code	GTIN-14			Application Identifier Code	Unique Serial Number
	Extension Digit (1 digit)	Company Prefix + Item Reference Number (9 digits)	Check Digit (1 digit)		(10 digits)
01	Country Code (3 digits)			21	1987654321
	0890155600006				

The final constitution of label is as follows:



Bottle Barcode Dimensions

Mil Size: 15 Mils

Barcode Dimension – 0.24” (Length) x 0.24” (Width)

Read Distance – By Hand Held Terminal – 2” – 6”

Label Size – 2”(Length) x 0.6”(Width) sticker

Note:

- Bottle GTIN and unique serial number must also be printed in human readable text.
- Application identifiers will also be encoded in barcode image without brackets.
- Regulatory Requirement such as Batch Number and Manufacturing Date will not be encoded in 2D barcode.
- Downloaded unique serial number from ESCIMS will be used and must be unique for bottles/mono cases.
- For mono case, dual 2D barcode will be pasted on the top of mono case.
- For bottle (without mono case), one image of dual 2D barcode will be pasted in the middle of cap of bottle and second image of dual 2D barcode will be aligned along the neck of the bottle.
- **Paper Type – Tamper Evident Label** - Water proof, self destructive, smudge proof
- **Life of Ink printed by printer** – It should be 1 to 2 years. Thermal transfer printer or inkjet printers may be used for barcode printing. It is recommended to use Resin Ribbons for printing barcode.
- **Scanning on Low Visibility** – Both the images of 2D barcode must be scannable and should work fine on the low visibility also.

Annexure IV – Sample XML Format

1. Bottle Barcodes (Generate Barcode Sequence Number) provided by ESCIMS in case of unmapped data

Bottle 2D Barcode Details:

S. No	Bottle Serial Number
1	089014880002350000064057
2	089014880002350000064058
3	089014880002350000064059
4	089014880002350000064060
5	089014880002350000064061
6	089014880002350000064062
7	089014880002350000064063
8	089014880002350000064064
9	089014880002350000064065
10	089014880002350000064066
11	089014880002350000064067
12	089014880002350000064068

Sample XML Format for Bottles barcode details for unmapped data:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<UNMAPPED_DATASET>
  <BOTTLE BARCODE="089014880002350000064057"/>
  <BOTTLE BARCODE="089014880002350000064058"/>
  <BOTTLE BARCODE="089014880002350000064059"/>
  <BOTTLE BARCODE="089014880002350000064060"/>
  <BOTTLE BARCODE="089014880002350000064061"/>
  <BOTTLE BARCODE="089014880002350000064062"/>
  <BOTTLE BARCODE="089014880002350000064063"/>
  <BOTTLE BARCODE="089014880002350000064064"/>
  <BOTTLE BARCODE="089014880002350000064065"/>
  <BOTTLE BARCODE="089014880002350000064066"/>
  <BOTTLE BARCODE="089014880002350000064067"/>
  <BOTTLE BARCODE="089014880002350000064068"/>
</UNMAPPED_DATASET>
```

2. Case Barcodes (Generate Barcode Sequence Number) provided by ESCIMS in case of unmapped data

Case 1D Barcode Details:

S. No	GTIN	ETN
1	18901488000232	088027530000074008
2	18901488000232	088027530000074015
3	18901488000232	088027530000074022

Sample XML Format for case barcode details for unmapped data:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<UNMAPPED_DATASET>
  <CASE GTIN="18901488000232" ETN="088027530000074008"/>
  <CASE GTIN="18901488000232" ETN="088027530000074015"/>
  <CASE GTIN="18901488000232" ETN="088027530000074022"/>
</UNMAPPED_DATASET>
```

3. Mapped data to be created by distillery application and uploaded on ESCIMS (provide Barcode Details)

Mapped Barcode Data Details:

Case Details –

Case ETN – 088027530000074008

Case GTIN – 18901488000232

Batch No – 12ABC

Mfg Date – 130119

Expiry Date – 131219

Bottle Details:

S. No	Bottle Serial Number
1	089014880002350000064057
2	089014880002350000064058
3	089014880002350000064059
4	089014880002350000064060
5	089014880002350000064061
6	089014880002350000064062
7	089014880002350000064063
8	089014880002350000064064
9	089014880002350000064065
10	089014880002350000064066
11	089014880002350000064067
12	089014880002350000064068

Sample XML Format for case barcode details for unmapped data:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<MAPPED_DATASET>
  <CASE ETN="088027530000074008" GTIN="18901488000232" BATCH_NO="12ABC" MFG_DATE="130119"
  EXPIRY_DATE="131219">
    <BOTTLE BARCODE="089014880002350000064057"/>
    <BOTTLE BARCODE="089014880002350000064058"/>
    <BOTTLE BARCODE="089014880002350000064059"/>
    <BOTTLE BARCODE="089014880002350000064060"/>
    <BOTTLE BARCODE="089014880002350000064061"/>
    <BOTTLE BARCODE="089014880002350000064062"/>
    <BOTTLE BARCODE="089014880002350000064063"/>
    <BOTTLE BARCODE="089014880002350000064064"/>
    <BOTTLE BARCODE="089014880002350000064065"/>
    <BOTTLE BARCODE="089014880002350000064066"/>
    <BOTTLE BARCODE="089014880002350000064067"/>
    <BOTTLE BARCODE="089014880002350000064068"/>
  </CASE>
</MAPPED_DATASET>
```

Annexure V – Tamper Evident Labels

Material Description: Specifically designed for corrugated boxes having rough surface, dust and high moisture content. It is highly effective for manual application of the labels or where no applicator being used. Also, where the storage of boxes is improper so that label does not peel off.

The top coat is highly receptive to thermal printing as it is having white matt finish with ultradelaminable film. The total caliper of material is between 0.105mm plus minus 10%.

Adhesive:

A highly aggressive permanent rubber based adhesive featuring high initial tack and excellent ultimate bond strength to a wide range of substrates. The Adhesion is equally effective for Manual as well as Auto Application of the Labels.

Minimum Application Temperature: + 5° C

(The minimum temperature at which the label can be applied and will adhere)

Service Temperature Range: - 20° C to + 70° C

(The temperature range to which the label can be exposed after the adhesion bond to the substrate has been formed)

Application:

Typical applications include product identification labels on various types of corrugated boxes and glass containers. The moderate internal strength of the face allows the product to be used as a tamper evident label. The fragility associated with the high adhesive performance allows temper evidence labels. Preliminary testing on the substrate is necessary to confirm the right working of label.

Conversion:

This product can be printed in the usual printing technologies including water-based flexo, letter press, UV-Screen and thermal transfer; for variable information printing, thermal transfer and inkjet printing can be used.

It's recommended to use Resin Ribbons for Thermal Transfer Printing for better outcome.

Customized security cuts are also advised according to label size, to enable a better view of temper evidence if label is tried to be peeled off from the substrate.

It has also been observed that the bigger the label sizes provide better adherence due to larger bonding area and increase the material effectiveness.

Shelf Life: Two years when stored at 22° C