

EU-TPD¹ CODING DETAILS

Info for the trade

The product coding obligations mandated by EU-TPD regulation apply to tobacco products placed on the market in EU, and to tobacco products produced in EU, including the ones for export out of EU.

This document aims to explain to the involved trade actors the targeted product coding adopted by the ex-DCTA members² (the “Manufacturers”) in the frame of EU-TPD, in terms of code structure and data carrier for common packaging levels. This enables involved economic operators to understand what code they have to “scan” and register, as well as what kind of controls they can integrate in their local tracking system.

The sole purpose of this document is to provide helpful information regarding EU_TPD tobacco product coding details in support to relevant trade actors. However, this document is not legally binding to the Manufacturers who reserve their right to implement different solutions related to how their products comply with EU TPD traceability requirements.

1. Unit Level Unique Identifier (UI) (pack, pouch, tin, stand-up bags, etc.)



Code Structure:

The code structure is imposed by the EU-TPD implementing acts (IA)³ and is generated by ID Issuers appointed in their respective country (manufacturing country by default or destination country by derogation).

Note that the unit level unique identifier (UI) structure described below is based on the standards provided in the EU-TPD IA (art.8). It only serves the illustration purpose since each ID Issuer in EU may come with its own detailed UI structure and specificity.

TPD IA article reference	Data Element	Length [No. of chars]	Example	Comment
8.1 a	ID Issuer ID	ID Issuer specific	“KLTT”	Data carrier and human readable
8.1 b	Serial Number	ID Issuer specific	“wTw8djFS3”	Data carrier and human readable
8.1 c	Product Code (Business info)	ID Issuer specific	“iCrEm”	Data carrier only or included in human readable as well, depending on ID Issuer
8.1 d	Time Stamp ⁴	8	“19052111”	Data carrier only

Code Example:

- Data Carrier: **“5RKLTT:wTw8djFS3iCrEm19052111”**
(Note: “5R” and “:” are data qualifiers specific to ID Issuer to be removed in any data transmission)
- Human Readable: **“KLTTwTw8djFS3”**

¹ Directive 2014/40/EU or the Tobacco Products Directive (TPD).

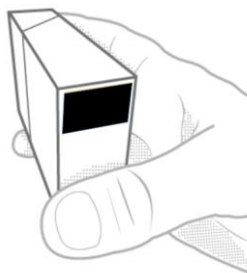
² The ex-DCTA members refer to: British American Tobacco (BAT), Imperial Tobacco Group (ITG), Japan Tobacco International (JTI) and Philip Morris International (PMI).

³ Commission Implementing Regulation (EU) 2018/574 on technical standards for the establishment and operation of a traceability system for tobacco products as amended by Commission Implementing Regulation 2023/448 of 1 March 2023 (TPD T&T Amendment).

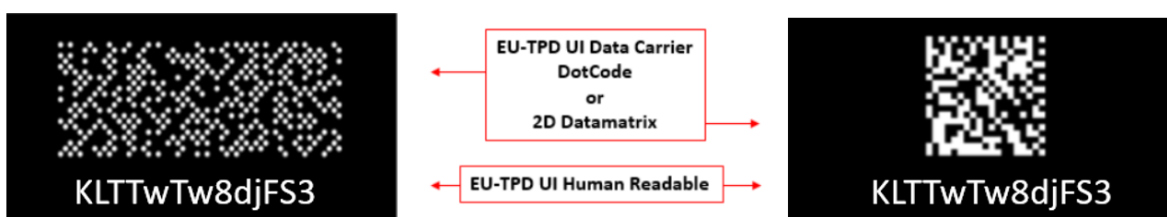
⁴ The TPD allows the time stamp to be Human Readable only, although every TPD message requires it within the unique identifier message to be transmitted, upUI(L). The ex-DCTA manufacturers will therefore include it in the machine-readable code to avoid extra complexity for the trade.

Code Look & Position:

Data carrier is Dotcode or 2D Datamatrix, positioned at the bottom of the pack for cigarettes (see illustration below) and on variable positions for Other Tobacco Products (OTP), such as pouches, tins, standup bags, etc.



Examples:



Code Processing Capability:

The Unit Level UI contains business specific data (such as product and manufacturing details) which are embedded by the ID Issuer which generated the code in a compressed way (3rd data element of the code).

The trade actors wishing to identify the product out of every Unit Level UI scanned should be able to integrate in their own scanning system's logic, the ID Issuer's specific decoding algorithm, relying on the set of "offline flat files" provided by the ID Issuers, as per EU-TPD IA, Article 20.

The trade actors not willing to implement this logic are also able to perform double scanning, relying on an initial scan of the existing EAN/GTIN-8/13 (available on every sellable unit in linear barcode format) to identify the product, and then the Unit Level UI requiring to be recorded and transmitted.

Code to be transmitted:

In accordance with the Secondary Repository specifications published by Dentsu ("List Of Specifications 2.0, chapter 6 – Unique Identifier), each ID Issuer may come with its own UI structure and specificity (such as adding extra data qualifiers to the UI), which might require extra processing (ex: removal of data qualifiers) by each Economic Operator having to report/transmit the scanned UI.

The codes to be transmitted being specific to the ID Issuer, they should follow applicable coding structure published by the relevant ID issuer in cooperation with its Issuing Agency.

2. Aggregated Level UIs (Outer, Carton, Bundle)



Code Structure:

The Manufacturers will independently generate the required Aggregated Level UI compliant with **ISO 15459-4**, which will be applied on each outer unit, fully in data carrier and human readable formats.

Code structure is a **GS1-SGTIN** (Serialized GTIN), including special characters (i.e. <FNC1>) and Application Identifiers (AI) as mandated by the standard, and completed with additional GS1 compliant data elements at the manufacturer's convenience.

Data Element	Length [no. of chars]	Example	Comment
<FNC1>	n/a	n/a	Special character mandated by GS1
AI 01	2	"01"	AI used as GTIN prefix
GTIN-14	14	"04023500715224"	Outer GS1 GTIN GTIN-14 or EAN-13 prefixed by "0"
AI 21	2	"21"	AI used as SN prefix
Serial Number	Variable (20 max)	"KVVJB497KL07"	Serial Number from GS1's 82 character set
<FNC1>	n/a	n/a	Special character mandated by GS1 if the AI 21 is less than 20 characters
AI 240	3	"240"	AI used as product code prefix
Product Code	Variable (30 Max)	"PRD45678", "FA060408.14", "ManufProduct12", etc.	Product Code as defined by the manufacturer

Optional example:

<FNC1>	n/a	n/a	Special character mandated by GS1 if further AIs are included and the (240) is less than 30 characters
AI 10	2	"10"	AI used as production batch prefix
Production Batch	Variable (20 Max)	"21ABCDEFGF"	Production Batch as defined by the manufacturer

Code Length per Manufacturer:

Current status,⁵ subject to changes in the future by each manufacturer.

Data Element	BAT [no. of chars]	ITG [no. of chars]	JTI [no. of chars]	PMI [no. of chars]
AI 01	2	2	2	2
GTIN-14	14	14	14	14
AI 21	2	2	2	2
Serial Number	19	17	12	12
AI 240	3	3	3	3
Product Code	8	8	8	11

Optional:

AI 10	2	2	2	2
Production Batch	Variable	Variable	Variable	Variable

Code Example:

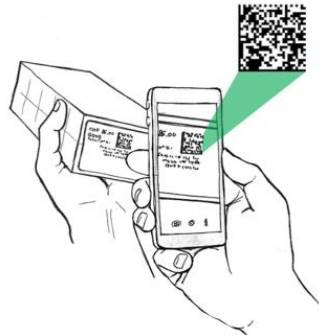
- Data Carrier: "<FNC1>010402350071522421KVVJB497KL07<FNC1>240PRD45678"
- Human Readable: "(01) 04023500715224
(21) KVVJB497KL07
(240) PRD45678"

⁵ Subject to adaptations

Code Look and Position:

Data carrier is 2D Datamatrix, positioned on the end panel of the outer, either on a label or directly applied on the carton.

The EU-TPD compliant data carrier to be used by the trade actors is highlighted by the special marking “EU TTT”⁶ above or next to it, offering the guarantee that the aggregation content has been registered by the aggregated unit builder (manufacturer or previous trade actor).



Example:

EU TTT



(01) 04023500715224
(21) KVVJB497KL07
(240) PRD45678

Code Processing Capability:

The Aggregated Level UI at outer level is a pure GS1 SGTIN according to ISO 15459-4, enabling any trade actor to identify the product out of the scanned UI, by using:

- either the <GTIN-14> part (prefixed by AI “01”),
- or the <Manufacturer Product Code> part (prefixed by AI “240”) providing a deeper product granularity,
- or both parts.

Code to be transmitted:

A GS1 aggregated level UI can include, in addition to the mandatory SGTIN parts “(01)..(21)..”, extra data strings prefixed with appropriate GS1 application identifiers (ex: (240).. or (10)..).

In accordance with the Secondary Repository data dictionary & specs (defined by Dentsu in the document called “CLARIFICATIONS ON THE REPORTING OF UNIQUE IDENTIFIERS” published on April 26th, 2019), **only** the mandatory SGTIN parts “(01)..(21)..” without GS1 application identifiers have to be transmitted.

Example:

- Data Carrier as printed “<FNC1>**010402350071522421**KVVJB497KL07<FNC1>**240PRD45678**”
- Expected logic: “<FNC1>~~01~~**0402350071522421**KVVJB497KL07<FNC1>~~240~~**PRD45678**”
- Code to be transmitted: “**04023500715224KVVJB497KL07**”

⁶ “TTT” marking introduced on 21.05.2019 is replaced by “EU TTT” as of 21.12.2023 as permitted TPD T&T Amendments

3. Aggregated Level Unique ID (Master Case)



Code Structure:

The Manufacturers will be independently generate the required Aggregated Level Unique ID compliant with **ISO 15459-4**, which will be applied on each master case unit, fully in data carrier and human readable formats.

Code structure is a **GS1-SGTIN** (Serialized GTIN), including special characters (i.e. <FNC1>) and Application Identifiers (AI) as mandated by the standard, and completed with additional GS1 compliant data elements at the Manufacturer's convenience.

Data Element	Length [chars]	Example	Comment
<FNC1>	n/a	n/a	Special character mandated by GS1
AI 01	2	"01"	AI used as GTIN prefix
GTIN-14	14	"05410706718553"	Master Case GS1 GTIN GTIN-14 or EAN-13 prefixed by "0"
AI 21	2	"21"	AI used as SN prefix
Serial Number	Variable (20 max)	"041703200737144901"	Serial Number, from GS1's 82 character set

Optional: example (can contain additional ones according to GS1 rules)

<FNC1>	n/a	n/a	Special character mandated by GS1 if the (21) is less than 20 characters
AI 240	3	"240"	AI used as product code prefix
Product Code	Variable (30 Max)	"PRD45678", "FA060408.14", "ManufProduct12", etc.	Product Code as defined by the manufacturer
<FNC1>	n/a	n/a	Special character mandated by GS1 if further AIs are included and the (240) is less than 30 characters
AI 10	2	"10"	AI used as production batch prefix
Production Batch	Variable (20 Max)	"21ABCDEFGF"	Production Batch as defined by the manufacturer

Code Length per Manufacturer:

Current status,⁷ subject to changes in the future by each Manufacturer.

Data Element	BAT [no. of chars]	ITG [no. of chars]	JTI [no. of chars]	PMI [no. of chars]
AI 01	2	2	2	2
GTIN-14	14	14	14	14
AI 21	2	2	2	2
Serial Number	19	16	16	18

Optional:

AI 240	3	3	3	3
Product Code	8	8	8	11
AI 10	2	2	2	2
Production Batch	Variable	Variable	8	Variable

Code Example:

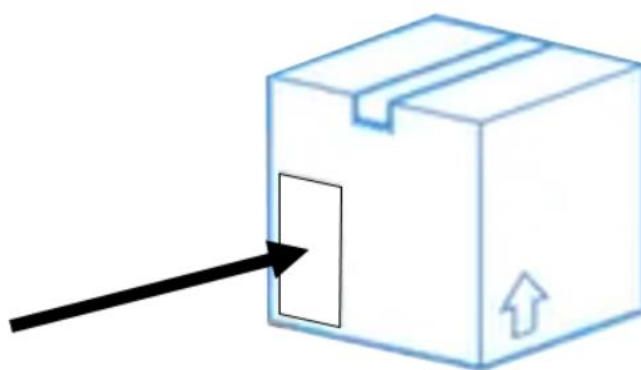
- Data Carrier: "<FNC1>**010541070671855321041703200737144901**<FNC1>**240PRD45678**"
- Human Readable: "(01) 05410706718553
(21) 041703200737144901
(240) PRD45678"

⁷ Subject to adaptations

Code Look and Position:

Data carrier is 2D Datamatrix, integrated on the existing case label positioned on one or two sides of the master cases. Some manufacturers are applying, in addition to the 2D Datamatrix, the equivalent code in linear barcode (GTIN-128) format.

The EU-TPD compliant data carrier to be used by the trade actors is highlighted by the special marking “EU TTT”⁸ above or next to it, offering the guarantee that the aggregation content has been registered by the aggregated unit builder (manufacturer or previous trade actor).



Example:

EU TTT



(01) 05410706718553
(21) 041703200737144901
(240) PRD45678

Code Processing Capability:

The Aggregated level UI at master case level is a pure GS1 SGTIN according to ISO 15459-4, enabling any trade actor to identify the product out of the scanned UI, by using:

- either the <GTIN-14> part (prefixed by AI “01”),
- or the <Manufacturer Product Code> part (prefixed by AI “240”) providing a deeper product granularity, if available,
- or both parts.

Code to be transmitted:

A GS1 aggregated level UI can include, in addition to the mandatory SGTIN parts “(01)..(21)..”, extra data strings prefixed with appropriate GS1 application identifiers (ex: (240).. or (10)..).

In accordance with the Secondary Repository data dictionary & specs (defined by Dentsu in the document called “*CLARIFICATIONS ON THE REPORTING OF UNIQUE IDENTIFIERS*” published on April 26th, 2019), **only** the mandatory SGTIN parts “(01)..(21)..” without GS1 application identifiers have to be transmitted.

Example:

- Data Carrier as printed “<FNC1>**010541070671855321041703200737144901**<FNC1>**240PRD45678**”
- Expected logic: “<FNC1>**010541070671855321041703200737144901**<FNC1>**240PRD45678**”
- Code to be transmitted: “**05410706718553041703200737144901**”

⁸ “TTT” marking introduced on 21.05.2019 is replaced by “EU TTT” as of 21.12.2023 as per permitted by TPD T&T Amendments

4. Aggregated Level Unique ID (Pallet, Mixed Case, Logistic Unit, etc.)



Code Structure:

The Manufacturers will independently generate the required Aggregated Level Unique ID compliant with **ISO 15459-1**, which will be applied on pallet, mixed cases and/or any logistic units entering in the EU-TPD scope, fully in data carrier and human readable formats.

Code structure is a **GS1-SSCC** (Serial Shipping Container Code), including special characters (i.e. <FNC1>) and Application Identifiers (AI) as mandated by the standard, and potentially completed with additional GS1 compliant data elements at the Manufacturer's convenience.

Data Element	Length [chars]	Example	Comment
<FNC1>	n/a	n/a	Special character mandated by GS1
AI 00	2	"00"	AI used as SSCC prefix
SSCC	18	"034023500070013765"	Pallet or Logistics Unit GS1 SSCC

Optional:

AI 10	2	"10"	AI used as production batch prefix
Production Batch	Variable (20 Max)	"21ABCDEFGF"	Production Batch as defined by the manufacturer

Code Example:

- Data Carrier: "<FNC1>**0034023500070013765**"
- Human Readable: "**(00) 0 34023500 07001376 5**"
- Expected logic: "<FNC1>**0034023500070013765**"
- Code to be transmitted: **034023500070013765**

Code Look and Position:

Data carrier is a Linear Barcode, integrated on the existing pallet label positioned on one side of the pallet. For manufacturers providing an aggregation for the entire delivery the linear bar code may also/instead be available on the physical Delivery Note document. As a further alternative some manufacturers may additionally provide electronic access to contents listing.

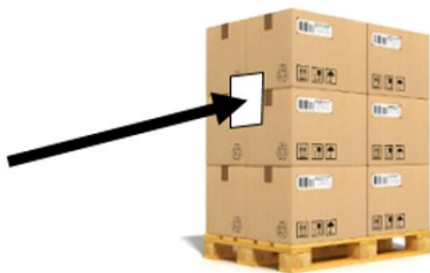
It can alternatively be a 2D Datamatrix for mixed cases or smaller logistic units.

The EU-TPD compliant data carrier to be used by the trade actors is highlighted by the special marking “EU TTT”⁹ above or next to it, offering the guarantee that the aggregation content has been registered by the aggregated unit builder (manufacturer or previous trade actor).

Note that this aggregation level (pallet, mixed case, logistic unit) is subject to change in the distribution. Manufacturers have different ways to handle it, so they may not all guarantee the presence of “EU TTT” (confirming the registration of the aggregation content), which might be delegated to the relevant trade actors when needed.

The below examples illustrate some possibilities, but each Manufacturer’s solution may vary.

Example of:
SSCC on a Pallet



Example of:
SSCC on a Delivery Note

or



Example:

EU TTT



(00) 0 34023500 07001376 5

⁹ "TTT" marking introduced on 21.05.2019 is replaced by "EU TTT" as of 21.12.2023 as permitted by TPD T&T Amendments