Encoding of Unique Identifiers

This document specifies how unique identifier (UI), alphanumeric code enabling the identification of a unit pack or an aggregated packaging of tobacco products, shall be encoded into data carrier.

Rules depicted in this document are in line with

- Commission Implementing Regulation 2018/574 of 15 December 2017 (Regulation)
  - Article 3(4)
  - Article 8 Structure of unit level UIs
  - Article 10 Marking by means of aggregated level UIs
  - Article 11 Structure of aggregated level UIs generated by ID issuers
- Recommendations from Eurodata Council, the issuing agency acc. to ISO 15459
- Clarifications on the structure of unit level identifiers issued by DG SANTE dating of 2019/04

Here described rules for encoding UIs into data carriers apply to every UI issued by us as appointed ID Issuer for Ireland, Sweden, Finland and Estonia, not to UIs issued by ID Issuers of other Member States or aggregated level unique identifiers (aUIs) created by the EOs themselves acc. to Article 10(4) [2] of Regulation.

According to information obtained from Eurodata Council, the issuing agency, we recommend the use of data identifier (**5R**) for the economic operators (EOs) to encode the UIs of the Issuers in a symbol in front of the unique identifier. This would clearly differentiate between generic Serial Numbers and a specific UI string for Tobacco pointing to issuer's specification.

Unit pack level Unique Identifiers (upUI)

In compliance with Article 8(3), manufacturers or importers shall add the time stamp referred to in paragraph 1, point (d), to the code generated by the ID issuer pursuant to paragraph 2. Time stamp in the form of a numeric sequence of eight characters, in the format YYMMDDhh, indicating the date and time of manufacture, shall be added in the last position.

If economic operator needs to encode unit level UI generated by Allexis as appointed ID Issuer, EO should replace our identification code "QCALL" with "**5R**QCALL**U:**".

Example of upUI generated by ID Issuer:

<div align="center">

QCALL1rg5ryJoy00AY

</div>

Example of upUI with timestamp, in the format YYMMDDhh, added by EO

<div align="center">

QCALL1rg5ryJoy00AY**19032710**

</div>

Example of upUI encoded by EO:

<div align="center">

5RQCALL**U:**1rg5ryJoy00AY**19032710**

</div>

Structure of unit level UI with qualifiers, as well as responsibilities for generation of content is given in the table below:

Data element	Symbology Identifier	Mandatory Data Qualifier	ID Issuer Identifier	Data Qualifier	Serial Number	Product Code	Time Stamp
Business content	Qualifier	Qualifier	Entity appointed by member state generating the code	Qualifier	Alphanumeric sequence uniquely identifying the pack	Code allowing for the determination of: 1. Place of manufacturing 2. Manufacturing facility 3. Machine 4. Product description 5. Intended market of retail sale 6. Intended shipment route 7. Importer into the Union (when applicable)	Time stamp indicating the date and hour of manufacturing
Format	ISO/IEC 16022:2006, or ISO/IEC 18004:2015, or ISS DotCode Symbology Spec.	ISO15459-2 and ISO15459-3	ISO15459-2	ISO15459-2 and ISO15459-3	ISO646	Art. 21(1) and ID issuer's structure	
Content	a) ISO/IEC 16022 DataMatrix: No FNC1 in first position, ISO/IEC 15424 Symbology ID "]d1" b) ISO/IEC 18003 QR: No FNC1 in first position, ISO/IEC 15424 Symbology ID "]Q1" c) AIM Dot Code: FNC1 in first position, ISO/IEC 15424 Symbology ID "]J0"	5R	QCALL	U:	Authorized characters set [a-z; A-Z; 0-9] 62 possibilities per digit	Authorized characters set [a-z; A-Z; 0-9] 62 possibilities per digit	<YYMMDDhh>
Length of element		2	5	2	9	4	8
Transmitted to repositories	No	No	Yes	No	Yes	Yes	Yes
	Added by EO	Added by EO	Generated by ID Issuer	Added by EO	Generated by ID Issuer	Generated by ID Issuer	Added by EO

Table 1 - Unit level UI structure

Aggregated level Unique Identifiers (aUI)

In compliance with Article 11(3), economic operators shall add the time stamp, referred to in paragraph 1, point (d), to the code generated by the ID issuer pursuant to paragraph 2. Time stamp in the form of a numeric sequence of eight characters, in the format YYMMDDhh , indicating the date and time of aggregation, shall be added in the last position.

If economic operator needs to encode aggregated level UI generated by Allexis as appointed ID Issuer, EO should replace our identification code "QCALL" with "**5R**QCALL**A:**"

Example of aUI generated by ID Issuer:

<p align="center">QCALL1anbJLPWPQCALLa006</p>

Example of aUI with timestamp, in the format YYMMDDhh, added by EO:

<p align="center">QCALL1anbJLPWPQCALLa006**19032710**</p>

Example of aUI encoded by Economic Operator:

<p align="center">**5R**QCALL**A:**1rg5ryJoy00AY**19032710**</p>

Structure of aggregated level UI with qualifiers, as well as responsibilities for generation of content is given in the table below:

Data element	Symbology Identifier	Mandatory Data Qualifier	ID Issuer Identifier	Data Qualifier	Serial Number	Facility Code	Time Stamp
Business content	Qualifier	Qualifier	Entity appointed by member state generating the code	Qualifier	Alphanumeric sequence uniquely identifying the pack	The identifier code of the facility in which the aggregation process took place.	Time stamp indicating the date and hour of aggregation
Format	ISO/IEC 16022:2006, or ISO/IEC 18004:2015, or ISS DotCode Symbology Spec.	ISO15459-2 and ISO15459-3	ISO15459-2	ISO15459-2 and ISO15459-3	ISO646	Art. 21(1) and ID issuer's coding structure	<YYMMDDhh>
	a) ISO/IEC 16022 DataMatrix: No FNC1 in first position, ISO/IEC 15424 Symbology ID "]d1" b) ISO/IEC 18003 QR: No FNC1 in first position, ISO/IEC 15424 Symbology ID "]Q1" c) AIM Dot Code: FNC1 in first position, ISO/IEC 15424 Symbology ID "]J0"	5R	QCALL	A:	Authorized characters set [a-z; A-Z; 0-9] 62 possibilities per digit	Code issued according to this specification made of: 1. The alphanumeric characters that constitute the ID issuer identification code (5 characters according to ISO15459-2) 2. An alphanumeric sequence which is unique within the code pool of the ID issuer (4 characters [a-z;A-Z;0-9] according to ISO646, 62 possibilities per digit)	
Length of element		2	5	2	9	9	8
Transmitted to repositories	No	No	Yes	No	Yes	Yes	Yes
	Added by EO	Added by EO	Generated by ID Issuer	Added by EO	Generated by ID Issuer	Generated by ID Issuer	Added by EO

Table 2 - Aggregated level UI structure

Sending Unique Identifiers to repository

The content of UI data shall be transmitted to the repository without data identifiers. UIs transmitted to the repository shall only contain data as generated by ID Issuer + time stamp added by economic operator.