Smurfit Westrock | Security Concepts

ID Issuer System Ireland

Identifiers Format and Structure

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General rules

System alphabet is consisting of uppercase and lowercase letters and numbers of English alphabet [A-Z, a-z, 0-9] n total count of possible 62 characters.

No other characters will be used for creation of entity identifiers (EOID, FID and MID) and unique identifiers (upUI and aUI).

ID Issuer ID for Ireland ID Issuer is **QCSWSC**.

At the end of each unique identifier (upUI and aUI), a time stamp in the form of YYMMDDHH has to be added according to the Regulation 2018/574 / EU.

Economic operator identifier code – EOID

General structure of **EOID** created by the system is :

Position	Name	Length	Example
1	**ID Issuer ID**	6	QCSWSC
2	**Identifier**		
	Identifier type Random Sequence	1 4	E G5Df

First position is **ID Issuer ID** with fixed length of 6 characters and fixed value **QCSWSC**.

Identifier consist of Identifier type and Random Sequence on second position.

Identifier type is fixed length of 1 character, and value **E**
– Economic Operator generated by ID Issuer for Ireland

Random sequence is fixed length of 4 characters and random value.

Example of created economic operator identifier (spaces only for easier reading here):

QCSWSC E G5Df

Facility identifier code – FID

General structure of **FID** created by the system is :

Position	Name	Length	Example
1	**ID Issuer ID**	6	QCSWSC
2	**Identifier**		
	Identifier type Random Sequence	1 4	F H7xp

First position is **ID Issuer ID** with fixed length of 6 characters and fixed value **QCSWSC**.

Identifier consist of Identifier type and Random Sequence on second position.

Identifier type is fixed length of 1 character, and value **F**
– Facility generated by ID Issuer for Ireland

Identifier is fixed length of 4 characters and random value.

Example of created facility identifier (spaces only for easier reading here):

QCSWSC F H7xp

Machine identifier code – MID

General structure of **MID** created by the system is :

Position	Name	Length	Example
1	ID Issuer ID	6	QCSWSC
2	**Identifier**		
	Identifier type Random Sequence	1 4	M f2k8

First position is **ID Issuer ID** with fixed length of 6 characters and fixed value **QCSWSC**.

Identifier consist of Identifier type and Random Sequence on second position.

Identifier type is fixed length of 1 character, and value **M**
– Machine generated by ID Issuer for Ireland

Identifier is fixed length of 4 characters and random value.

Example of created machine identifier (spaces only for easier reading here) :

QCSWSC M f2k8

Unit pack unique identifier – upUI

General structure of **upUI** created by the system is :

Position	Name	Length	Example
1	**ID Issuer ID**	6	QCSWSC
2	**Serial Number**		
	Identifier type Random Sequence	1 8	1 T6hj8Ku6
3	**Product Code**	4	42Gf

First position is **ID Issuer ID** with fixed length of 6 characters and fixed value **QCSWSC**.

Serial number consist of Identifier type and Random Sequence on second position.

Identifier type with fixed length of 1 character, and fixed value **1**
– unit pack unique identifiers generated by ID Issuer for Ireland

Random Sequence with fixed length of 8 characters and random value.

Third position is **Product Code** with fixed length of 4 characters and random value.

Example of created unit pack unique identifier (spaces only for easier reading here):

QCSWSC 1 T6hj8Ku6 42Gf

Aggregation unique identifier – aUI

General structure of **aUI** created by the system is:

Position	Name	Length	Example
1	**ID Issuer ID**	6	QCSWSC
2	**Serial Number**		
	Identifier type Random Sequence	1 8	2 kd75LD13
3	**Facility Code**	4	fd20

First position is **ID Issuer ID** with fixed length of 6 characters and fixed value **QCSWSC**.

Serial number consist of Identifier type and Random Sequence on second position.

Identifier type with fixed length of 1 character, and fixed value **2**
– aggregation unique identifiers generated by ID Issuer for Ireland

Random Sequence with fixed length of 8 characters and random value.

Third position is **Facility Code** with fixed length of 4 characters and random value.

Example of created unit pack unique identifier (spaces only for easier reading here) :

QCSWSC 2 kd75LD13 fd20

Human readable representation – HR

General structure of **HR** created by the system is :

Position	Name	Length	Example
1	**ID Issuer ID**	6	QCSWSC
2	**Serial Number**		
	Identifier type Random Sequence	1 8	1 nM224pL9

First position is **ID Issuer ID** with fixed length of 6 characters and fixed value **QCSWSC**.

Identifier type with fixed length of 1 character, and fixed value **1**
– unit pack unique identifiers generated by ID Issuer for Ireland

Random Sequence with fixed length of 8 characters and random value.

Example of created human readable representation of unit pack unique identifier (spaces only for easier reading here) :

QCSWSC 1 nM224pL9

Serial numbers file structure

For each request for serial numbers sent to ID Issuer, system will create files with serial numbers in two formats – XML and JSON. Those files are then archived in zip archive available for download.

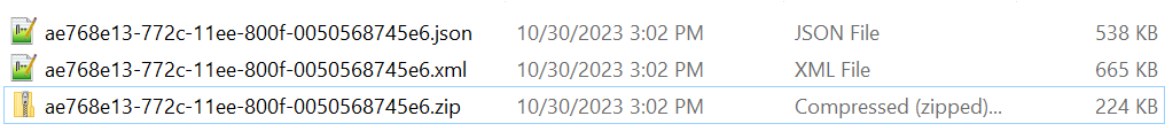

Figure 1 - Serial numbers archive structure

Unit pack file structure

XML format file is with following structure:

```
<?xml version="1.0" encoding="utf-8" ?>
<response>
        <status>success</status>
        <errorMessage></errorMessage>
        <errorCode>0</errorCode>
        <Req_ID>ae768e13-772c-11ee-800f-0050568745e6</Req_ID>
        <EO_ID>QCSWSCEG7MH</EO_ID>
        <F_ID>QCSWSCFMNAQ</F_ID>
        <M_ID>QCSWSCM3R9A</M_ID>
        <Req_Type>1</Req_Type>
        <elements_code>
                <element name="id_issuer_id" position="1">6</element>
                <element name="identifier_type" position="2">1</element>
                <element name="random_sequence" position="3">8</element>
                <element name="product_code" position="4">4</element>
        </elements_code>
        <elements_code_hr>
                <element name="id_issuer_id" position="1">6</element>
                <element name="identifier_type" position="2">1</element>
                <element name="random_sequence" position="3">8</element>
        </elements_code_hr>
        <codes>
                <code>
                        <ui>QCSWSC172NYGYTNF4EN</ui>
                        <hr>QCSWSC172NYGYTN</hr>
                </code>
                <code>
                        <ui>QCSWSC1A391105XF4EN</ui>
                        <hr>QCSWSC1A391105X</hr>
                </code>
        </codes>
        <timestamp>2023-10-30T15:02:20+01:00</timestamp>
</response>
```

Tag	Description
status	Status of order – success or error
errorMessage	Text error message in case of error
errorCode	Error ID in case of error
Req_ID	Unique ID of request
EO_ID	Economic operator ID
F_ID	Facility ID
M_ID	Production machine ID
Req_Type	Request type – 1 for unit package, 2 for aggregation, 3 for reaggregation
elements_code	Definition of fields in ui
elements_code_hr	Definition of fields in human readable representation
ui	upUI for single package
hr	Human readable representation for ipUI
timestamp	File creation timestamp

JSON format file is with following structure:


```
{
  "status": "success",
  "errorMessage": "",
  "errorCode": 0,
  "Req_ID": "ae768e13-772c-11ee-800f-0050568745e6",
  "EO_ID": "QCSWSCEG7MH",
  "F_ID": "QCSWSCFMNAQ",
  "M_ID": "QCSWSCM3R9A",
  "Req_Type": 1,
  "elements": [
    {
      "name": "id_issuer_id",
      "length": 6,
      "position": 1
    },
    {
      "name": "identifier_type",
      "length": 1,
      "position": 2
    },
    {
      "name": "random_sequence",
      "length": 8,
      "position": 3
    },
    {
      "name": "product_code",
      "length": 4,
      "position": 4
    }
  ],
  "elements_hr": [
    {
      "name": "id_issuer_id",
      "length": 6,
      "position": 1
    },
    {
      "name": "identifier_type",
      "length": 1,
      "position": 2
    },
    {
      "name": "random_sequence",
      "length": 8,
      "position": 3
    }
  ],
  "codes": [
    {
      "ui": "QCSWSC172NYGYTNF4EN",
      "hr": "QCSWSC172NYGYTN"
    },
    {
      "ui": "QCSWSC1A391105XF4EN",
      "hr": "QCSWSC1A391105X"
    }
  ],
  "timestamp": "2023-10-30T15:02:20+01:00"
}
```


Tag	Description
Status	Status of order – success or error
errorMessage	Text error message in case of error
errorCode	Error ID in case of error
Req_ID	Unique ID of request
EO_ID	Economic operator ID

F_ID	Facility ID
M_ID	Production machine ID
Req_Type	Request type – 1 for unit package, 2 for aggregation, 3 for reaggregation
elements_code	Definition of fields in ui
elements_hr	Definition of fields in human readable representation
Ui	upUI for single package
Hr	Human readable representation for ipUI
Timestamp	File creation timestamp

Aggregation and reaggregation pack file structure

XML format file is with following structure:

```
<?xml version="1.0" encoding="utf-8" ?>
<response>
        <status>success</status>
        <errorMessage></errorMessage>
        <errorCode>0</errorCode>
        <Req_ID>3bdd7c7b-773a-11ee-800f-0050568745e6</Req_ID>
        <EO_ID>QCSWSCEG7MH</EO_ID>
        <F_ID>QCSWSCFMNAQ</F_ID>
        <M_ID></M_ID>
        <Req_Type>2</Req_Type>
        <elements_code>
                <element name="id_issuer_id" position="1">6</element>
                <element name="identifier_type" position="2">1</element>
                <element name="random_sequence" position="3">8</element>
                <element name="facility_code" position="4">4</element>
        </elements_code>
        <codes>
                <code>QCSWSC2PJRU4RNKu7C4</code>
                <code>QCSWSC2KWKSMWRCu7C4</code>
        </codes>
        <timestamp>2023-10-30T16:39:27+01:00</timestamp>
</response>
```

Tag	Description
Status	Status of order – success or error
errorMessage	Text error message in case of error
errorCode	Error ID in case of error
Req_ID	Unique ID of request
EO_ID	Economic operator ID
F_ID	Facility ID
M_ID	Empty for aggregation/reaggregation files
Req_Type	Request type – 1 for unit package, 2 for aggregation, 3 for reaggregation
elements_code	Definition of fields in ui
code	UI for aggregation/reaggregation package
timestamp	File creation timestamp

JSON format file is with following structure:


```
{
  "status": "success",
  "errorMessage": "",
  "errorCode": 0,
  "Req_ID": "467e4f0e-773a-11ee-800f-0050568745e6",
  "EO_ID": "QCSWSCEG7MH",
  "F_ID": "QCSWSCFMNAQ",
  "M_ID": null,
  "Req_Type": 3,
  "elements": [
    {
      "name": "id_issuer_id",
      "length": 6,
      "position": 1
    },
    {
      "name": "identifier_type",
      "length": 1,
      "position": 2
    },
    {
      "name": "random_sequence",
      "length": 8,
      "position": 3
    },
    {
      "name": "facility_code",
      "length": 4,
      "position": 4
    }
  ],
  "codes": [
    "QCSWSC2PJRU4RNKu7C4",
    "QCSWSC2KWKSMWRCu7C4"
  ],
  "timestamp": "2023-10-30T16:39:27+01:00"
}
```


Tag	Description
Status	Status of order – success or error
errorMessage	Text error message in case of error
errorCode	Error ID in case of error
Req_ID	Unique ID of request
EO_ID	Economic operator ID
F_ID	Facility ID
M_ID	Empty for aggregation/reaggregation files
Req_Type	Request type – 1 for unit package, 2 for aggregation, 3 for reaggregation
Elements	Definition of fields in ui
Codes	UIs for aggregation/reaggregation packages
Timestamp	File creation timestamp

Identifier types

Character	Interpretation	Character	Interpretation
A	*reserved*	**S**	*reserved*
B	*Not used*	**T**	*reserved*
C	*reserved*	**U**	*reserved*
D	*reserved*	**V**	*reserved*
E	**EOID, ID Issuer Ireland**	**W**	*reserved*
F	**FID, ID Issuer Ireland**	**X**	*reserved*
G	*reserved*	**Y**	*reserved*
H	*reserved*	**Z**	*reserved*
I	*Not used*	**0**	*reserved*
J	*reserved*	**1**	**upUI, ID Issuer Ireland**
K	*reserved*	**2**	**aUI, ID Issuer Ireland**
L	*reserved*	**3**	*reserved*
M	**MID, ID Issuer Ireland**	**4**	*reserved*
N	*reserved*	**5**	*reserved*
O	*Not used*	**6**	*reserved*
P	*reserved*	**7**	*reserved*
Q	*reserved*	**8**	*reserved*
R	*reserved*	**9**	*reserved*

Data carrier encoding (recommendation)

Structure of a unit-level unique identifier

(after encoding into a data carrier)

compliant with Implementing Regulation 2018/574 and the applicable international standards

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Unique identifier:	**Symbology Identifier**	**Mandatory Data Qualifier**	**ID Issuer Identification Code**	**Optional Data Qualifier**	**Serial Number**	**Optional Data Qualifier**	**Product code**	**Optional Data Qualifier**	**Timestamp**
Type:	Qualifier	Qualifier	String (**data element**)	Qualifier	String (**data element**)	Qualifier	String (**data element**)	Qualifier	String (**data element**)
Position within the unique identifier:	Fixed	Fixed	Fixed	Free	Free	Free	Free	Fixed	Fixed
Regulated by:	Art. 21(1) and ID issuer's coding structure	Art.3(4), Art.8(1)(a), Art. 21(1) and ID issuer's coding structure	Art.3(4) and Art.8(1)(a)	Art. 21(1) and ID issuer's coding structure	Art.8(1)(b)	Art. 21(1) and ID issuer's coding structure	Art.8(1)(c)	Art. 21(1), Art. 21(4) and ID issuer's coding structure	Art.8(1)(d) and Art.21(4)
Applicable international standards:	ISO/IEC 16022:2006, or ISO/IEC 18004:2015, or ISS DotCode Symbology Spec.	ISO 15459-2:2015 and ISO 15459-3:2014	ISO 15459-2:2015 and ISO 15459-3:2014						
Process	Applied by EO	Applied by EO	Generated by ID issuer	Applied by EO	Generated by ID issuer	Applied by EO	Generated by ID issuer	Applied by EO	Applied by EO
Transmission to the repositories system	No	No	Yes	No	Yes	No	Yes	No	Yes

Note: For the purpose of the above schema, group separators (/FNC1) are considered in the same manner as optional data qualifiers, i.e. their use depends on ID issuer's coding structure.

Example of recommended structure

Mandatory Data Qualifier	ID Issuer ID	Optional Data Qualifier	Serial Number	Product Code	Time Stamp
Added by EO	**Generated by ID Issuer**	**Added by EO**	**Generated by ID Issuer**	**Generated by ID Issuer**	**Added by EO**
5R	**QCSWSC**	**:**	**1Hu78gb4f**	**XXyy**	**19053011**

Machine readable code, before encoding into chosen data carrier:

5RQCSWSC:1Hu78gb4fXXyy19053011